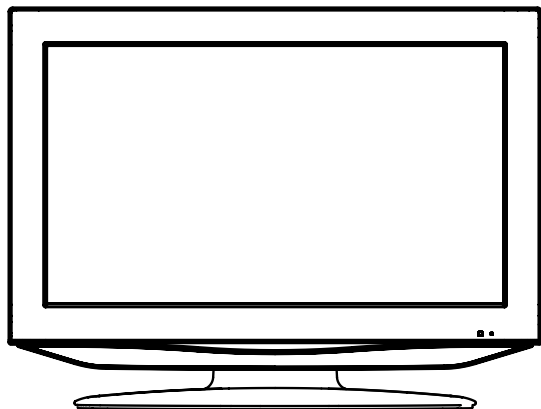


SHARP SERVICE MANUAL

S3701LC26SH12



LCD COLOR TELEVISION

MODEL **LC-26SH12U**

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.

Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a  mark, the designated parts must be used.

4. BE CAREFUL WITH THE LCD PANEL

Avoid a shock to the panel while servicing. Take enough care to deal with it.

5. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

6. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the external exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal
Earphone jack

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER

The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.

2. PART NO. and DESCRIPTION

You can find it in your SERVICE MANUAL.

IMPORTANT

When you exchange IC and Transistor with a heat sink, apply silicon grease (YG6260M) on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damage to the IC and Transistor).

ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.

(Please refer to figures.)



Caution:

- Pb free solder has a higher melting point than standard solder;
Typically the melting point is 86°F~104°F(30°C~40°C) higher.
Please use a soldering iron with temperature control and adjust it to 650°F ± 20°F (350°C ± 10°C).
In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).
- All products with the printed circuit board with PbF printing must be serviced with lead free solder.
When soldering or unsoldering, completely remove all of the solder from the pins or solder area,
and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

Recommendations

Recommended lead free solder composition is Sn-3.0Ag-0.5Cu.

GENERAL SPECIFICATIONS

G-1	TV System	LCD	LCD Size / Visual Size		25.5 inch / 647.7mmV		
			LCD Type	Color TFT LCD			
			Number of Pixels	1366(H) x 768(V)			
		View Range	Left/Right Up/Down	88/88 degree			
				88/88 degree			
		Color System			NTSC		
		Speaker			2 Speaker		
			Position		Front		
			Size		1.6 x 4.8 inch		
			Impedance		4 ohm		
		Sound Output	Max		5.0W + 5.0W		
			10%(Typical)		---		
G-2	Tuning System	Broadcasting System	Analog		US System M		
			Digital		ATSC(8VSB)/QAM		
		Tuner and Receive CH	System		1Tuner		
			Destination		US (W/CABLE)		
			CH Coverage		2~69, 4A, A-5~A-1, A~I, J~W, W+1~W+84		
		Intermediate Digital			44.00MHz		
		Frequency Analog	Picture(FP)		45.75MHz		
			Sound(FS)		41.25MHz		
			FP-FS		4.50MHz		
			Preset CH		No		
	Stereo/Dual TV Sound		US-Stereo				
	Tuner Sound Muting		Yes				
G-3	Signal	Video Signal	Input Level		1 V p-p/75 ohm		
			Output Level		--		
			S/N Ratio (Weighted)		--		
			Horizontal Resolution at DVD Mode		--		
					--		
		RGB Signal	Output Level		--		
		Audio Signal	Input Level		0.85 V p-p/50k ohm		
			Output Level	at DVD at TV	-- -- --		
			Digital Output Level		0.5 V p-p/75 ohm		
			S/N Ratio at DVD (Weighted)		--		
			Harmonic Distortion		--		
			Frequency Response :	at DVD at Video CD at SVCD at CD	-- -- -- --		
		G-4	Power	Power Source	AC		120V, 60Hz
					DC		--
				Power Consumption		at AC at DC	135W at 120V 60Hz --
	Stand by (at AC)				1W at 120V 60Hz		
	Energy Star				Yes		
	Per Year				-- kWh/Year		
	Protector	Power Fuse		Yes			
		Safety Circuit		Yes			
		IC Protector(Micro Fuse)		Yes			
G-5	Regulation	Safety			UL(UL6500_2nd)/CSA(E60065_00)		
		Radiation			FCC / IC		
		Laser			--		
G-6	Temperature	Operation			0oC ~ +40oC		
		Storage			-20oC ~ +60oC		
G-7	Operating Humidity				Less than 80% RH		
G-8	Clock and Timer	Clock			No		
		Sleep Timer	Max Time		120 Min		
			Step		<u>10 Min</u>		
		On Timer	Program		No		
		Off Timer	Program		No		
		Game Timer			No		
		Wake Up Timer			No		
			Timer Back-up (at Power Off Mode)	more than	-- Min Sec		

GENERAL SPECIFICATIONS

G-9	Remote Control	Unit	RC-MQ
		Glow in Dark Remocon	No
		Remocon Format	SHARP
		Format	SHARP
		Custom Code	10000 / 10001
		Power Source	3V
		Voltage(D.C)	UM-3 x 2 pcs
		UM size x pcs	
		Total Keys	40 Keys
		Keys	Yes
		POWER	No
		FUNCTION	No
		Source POWER	No
		DISPLAY	Yes
		LIGHT	No
		SEARCH+	No
		SEARCH-	No
		PLAY	No
		REC	No
		STOP	No
		PAUSE	No
		SKIP+	No
		SKIP-	No
		VIEW MODE	Yes
		1	Yes
		2	Yes
		3	Yes
		4	Yes
		5	Yes
		6	Yes
		7	Yes
		8	Yes
		9	Yes
		0	Yes
		.	Yes
		ENT	Yes
		INPUT	Yes
		FLASH BACK	Yes
		VOL+	Yes
		VOL-	Yes
		CH+	Yes
		CH-	Yes
		SURROUND	Yes
		MUTE	Yes
		FREEZE	Yes
		MENU	Yes
		LEFT	Yes
		ENTER	Yes
		RIGHT	Yes
		UP	Yes
		DOWN	Yes
		EXIT	Yes
		RETURN	Yes
		FAVORITE A	Yes
		FAVORITE B	Yes
		FAVORITE C	Yes
		FAVORITE D	Yes
		FAVORITE	No
		SLEEP	Yes
		AUDIO	Yes
		AV MODE	Yes
		CC	Yes

GENERAL SPECIFICATIONS

G-10	Features	Auto Shut Off	Yes
		Auto Search	No
		Power On Memory	Yes
		Comb Filter	Yes
			<u>3</u> -D
		Game Position	No
		Auto Setup(Language/CH Program)	No
		Picture Setting(TV)	Yes
		AV Mode(Picture Preference)	Yes
		Brightness , Contrast , Color	Yes
		Tint	Yes
		Sharpness	Yes
		Color Temperature	Yes
		Cable Clear	No
		Backlight	Yes
		Picture Setting(PC)	Yes
		Brightness , Contrast	Yes
		HOR Position , VER Position	Yes
		Phase, Clock	Yes
		Red, Green, Blue	Yes
		Auto Adjust	No
		Backlight	Yes
		Audio	MTS
		Tone Control (Bass/Treble/Balance)	Yes
		Stable Sound	No
		Surround	Yes
		BBE	No
		SRS WOW (SRS 3D/Focus/Tru Bass)	No
		Variable Audio Out	No
		Tuning	CH Program
		Air/Cable	Yes
		ADD/DELETE	Yes
		Label	CH Label
		Video Label	Yes
		Favorite CH	Yes
		V-Chip	Yes
		Type	<u>USA/CANADA Type</u>
		RRT Setup	Yes
		Lock	Hotel Lock
		Channel Lock	No
		Video Lock	No
		Panel Lock	No
		OSD Language	English French Spanish
		Closed Caption	Yes
		CC Advanced	Yes
		View Mode (Picture Size)	Yes
		Picture Scroll	Yes
		Cinema Mode	Yes
		Aspect	Yes
		PFC(Power Factor circuit)	No
		Freeze frame	Yes
		PIP/POP	No
		Direct Input Selection	Yes
		Digital Out	Dolby Digital
		MPEG	No
		PCM	Yes
		DTS	No

GENERAL SPECIFICATIONS

		PC Monitor Input		Yes
			VGA (640x480)	Yes (60Hz)
			VGA (720x400)	Yes (70Hz)
			WVGA (848x480)	Yes (60Hz)
			SVGA (800x600)	Yes (60Hz)
			XGA (1024x768)	Yes (60Hz)
			WXGA (1280x768)	Yes (60Hz)
			WXGA (1280x720)	Yes (60Hz)
			WXGA (1360x768)	Yes (60Hz)
			SXGA (1280x1024)	No
		HDMI Input		Yes
			VGA (640x480)	Yes (60Hz)
			720x480i (4:3)	Yes (60Hz)
			720x480i (16:9)	Yes (60Hz)
			720x480p (4:3)	Yes (60Hz)
			720x480p (16:9)	Yes (60Hz)
			720x576i (4:3)	No
			720x576i (16:9)	No
			720x576p (4:3)	No
			720x576p (16:9)	No
			1280x720p	Yes (60Hz)
			1920x1080i	Yes (60Hz)
		Component Input		Yes
			720x480i (4:3)	Yes (60Hz)
			720x480i (16:9)	Yes (60Hz)
			720x480p (4:3)	Yes (60Hz)
			720x480p (16:9)	Yes (60Hz)
			720x576i (4:3)	No
			720x576i (16:9)	No
			720x576p (4:3)	No
			720x576p (16:9)	No
			1280x720p	Yes (60Hz)
			1920x1080i	Yes (60Hz)
G-11	Accessories	Owner's Manual	Language	English/French/Spanish
			w/Guarantee Card	Yes
		Remote Control Unit		Yes
		Rod Antenna		No
			Poles	--
		Loop Antenna	Terminal	--
				No
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Facility List		No
		Important Safeguard		No
		Dew/AHC Caution Sheet		No
		Quick Set-up Sheet		No
		Battery		Yes
			UM size x pcs	UM-3 x 2 pcs
			OEM Brand	No
		AC Adapter		No
		AC Cord (for AC Adapter)		No
		AC Cord (Flat Polarity Plugs)		Yes
		Cable Cramp		Yes
		Stand		Yes
		Stand Screw		Yes
		Hexagon Wrench		Yes
		AV Cord (2Pin-1Pin)		No
		Registration Card (NDL Card)		Yes
		300 to 75ohm Antenna Adapter		No
		Cleaning Cloth		Yes
		Sheet Information (Return)		No
		Sheet Information (HDMI)		No

GENERAL SPECIFICATIONS

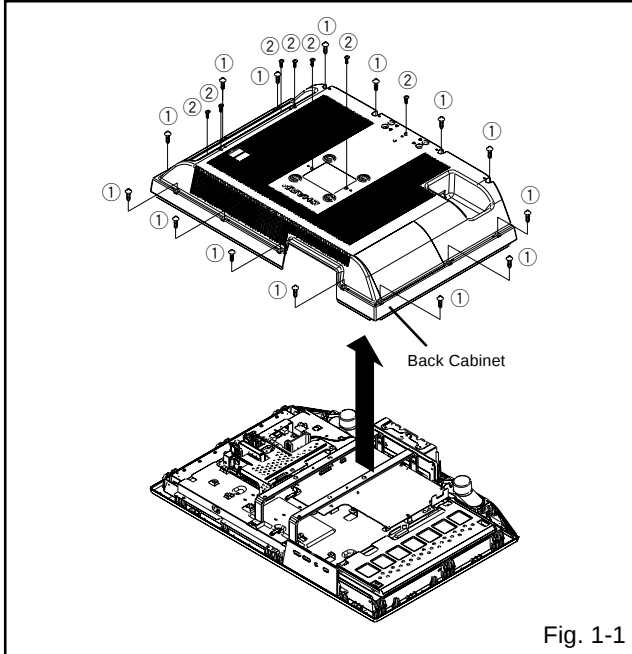
G-12	Interface	Switch	Top	Power (Tact)	Yes
				Channel Up/Menu Up	Yes
				Channel Down/Menu Down	Yes
				Volume Up/Menu >	Yes
				Volume Down/Menu <	Yes
				Menu	No
				Play	No
				Eject	No
				Skip+, Search+	No
				Skip-, Search-	No
				Still/Pause	No
				Stop	No
				Main Power SW	No
				Input Select	Yes
		Indicator	Rear	Main Power SW	No
				Power/Stand-By	Yes (Green / Red)
				On Timer	No
		Terminals	Side	Video Input 1	RCA x 1
				Audio Input 1	RCA x 2(L/MONO, R)
				S - Input 1	Yes
				Video Input 2	RCA x 1
				Audio Input 2	RCA x 2(L/MONO, R)
				S - Input 2	No
				Video Output	No
				Audio Output	No
				Component Input 1	RCA x 3
				Analog Audio	Video Input 2 Audio Input Alternative
				Component Input 2	No
				Analog Audio	No
				HDMI Input 1	HDMI x 1
				Analog Audio	Mini Jack
				Sub Woofer Out	No
				PC Monitor Input	Yes
				Analog Audio	HDMI 1 Audio Input Alternative
				Digital Audio Output	Coaxial
				DC Jack (Center +)	No
				VHF/UHF Antenna Input	F Type
				Video Input 3	No
				Audio Input 3	No
				S - Input 3	No
				Other Terminal	No
					Rear
G-13	Set Size		Approx. W x D x H (mm)	663 x 243 x 500	
			w/o Handle, Stand Approx. W x D x H (mm)	663 x 116 x 451	
G-14	Weight		Net (Approx.)	13.0kg (28.4lbs)	
			Net w/o Handle, Stand (Approx.)	11.5kg (25.4lbs)	
			Gross (Approx.)	15.5kg (34.2lbs)	
G-15	Carton	Master Carton		No	
			Content	--- Sets	
			Material	--- / ---	
			Dimensions W x D x H(mm)	---	
			Description of Origin	---	
		Gift Box	Material	Double/Brown	
			W/Color Photo Label	No	
			W/Handle	No	
			Dimensions W x D x H(mm)	762 x 277 x 567	
		Drop Test	Description of Origin	Yes	
				1 Corner / 3 Edges / 5 Surfaces	
			Height (cm)	32	
			Container Stuffing (40' container)	516 Sets/40' container	
			w/Pallet	No	
			w/Wrapping	No	
		G-16	Material	Cabinet	Front
Rear	PS 94V0 NON-DECABROM				
Jack Panel	--				
PCB	Non-Halogen Demand			No	
	Eyelet Demand			Yes	
G-17	Environment		Environmental standard requirement	Green procurement of SHARP	
		Pb-free		Phase3(Phase3A)	
			Measures for Whisker	Yes	
		Rohs		Yes	

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

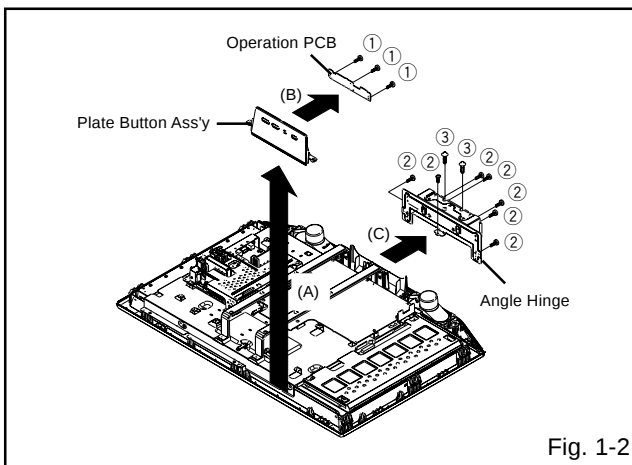
1-1: BACK CABINET (Refer to Fig. 1-1)

1. Remove the 14 screws ①.
2. Remove the 7 screws ②.
3. Remove the Back Cabinet in the direction of arrow.



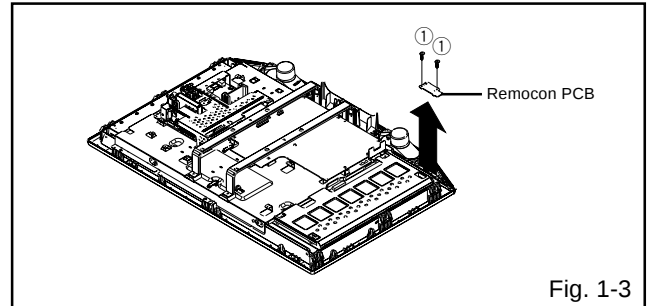
1-2: OPERATION PCB (Refer to Fig. 1-2)

1. Disconnect the following connector: (CP103).
2. Remove the Plate Button Ass'y in the direction of arrow (A).
3. Remove the 3 screws ①.
4. Remove the Operation PCB in the direction of arrow (B).
5. Remove the 7 screws ②.
6. Remove the 2 screws ③.
7. Remove the Angle Hinge in the direction of arrow (C).



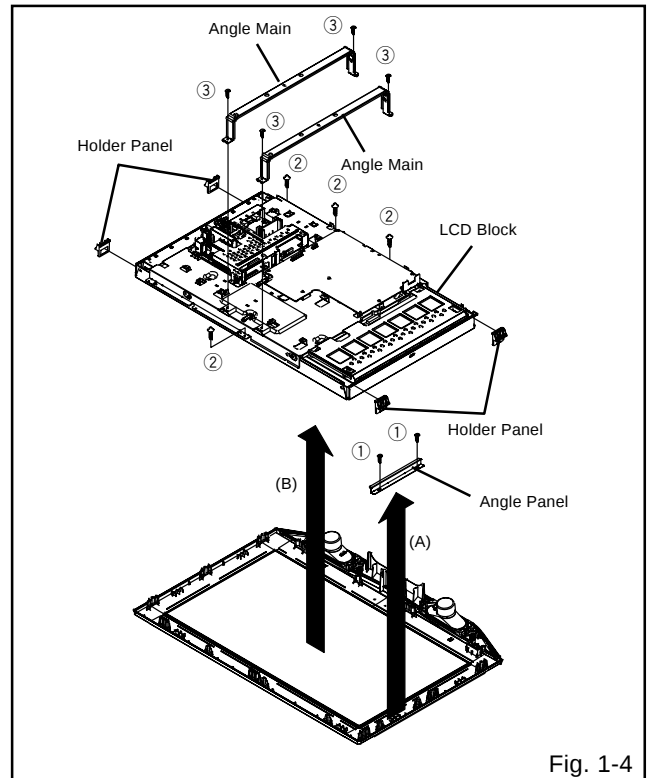
1-3: REMOCON PCB (Refer to Fig. 1-3)

1. Disconnect the following connector: (CP106).
2. Remove the 2 screws ①.
3. Remove the Remocon PCB in the direction of arrow.



1-4: LCD BLOCK (Refer to Fig. 1-4)

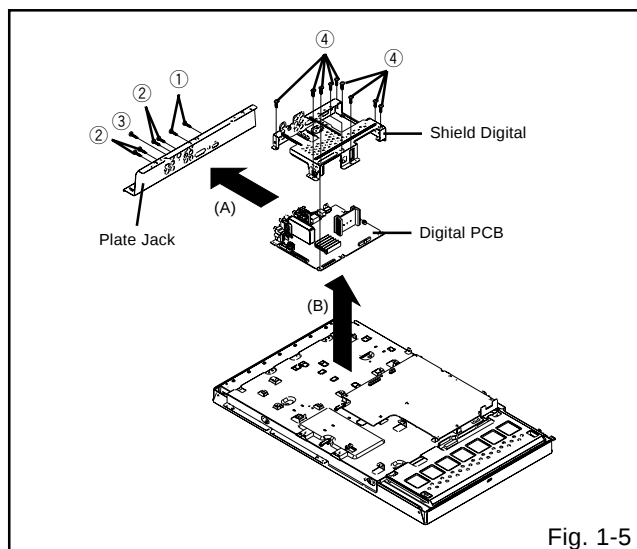
1. Disconnect the following connectors: (CP406, CP1001 and CP2407).
2. Remove the 2 screws ①.
3. Remove the Angle Panel in the direction of arrow (A).
4. Remove the Holder Panel.
5. Remove the 4 screws ②.
6. Remove the LCD Block in the direction of arrow (B).
7. Remove the 4 screws ③.
8. Remove the Angle Main.



DISASSEMBLY INSTRUCTIONS

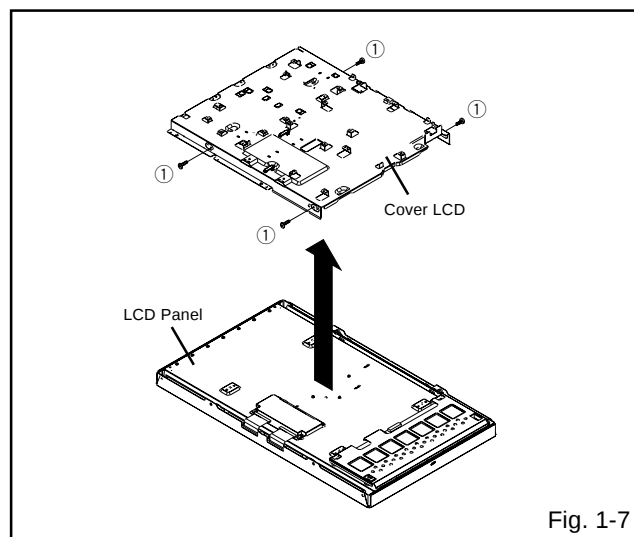
1-5: DIGITAL PCB (Refer to Fig. 1-5)

1. Disconnect the following connector:
(CP3401).
2. Remove the 2 screws ①.
3. Remove the 4 screws ②.
4. Remove the screw ③.
5. Remove the Plate Jack in the direction of arrow (A).
6. Remove the 9 screws ④.
7. Remove the Digital PCB and Shield Digital in the direction of arrow (B).



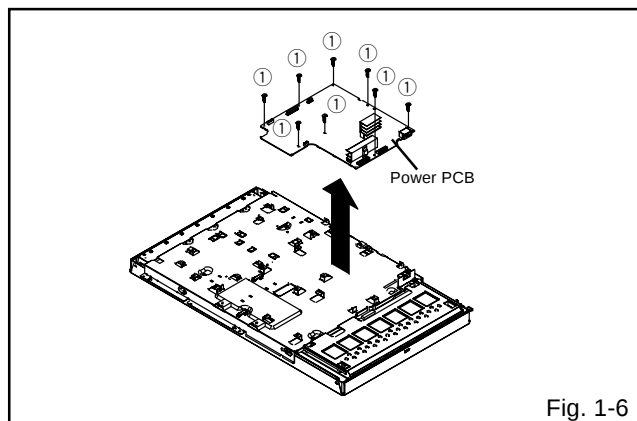
1-7: COVER LCD (Refer to Fig. 1-7)

1. Remove the 4 screws ①.
2. Remove the Cover LCD in the direction of arrow.



1-6: POWER PCB (Refer to Fig. 1-6)

1. Remove the 8 screws ①.
2. Remove the Power PCB in the direction of arrow.



DISASSEMBLY INSTRUCTIONS

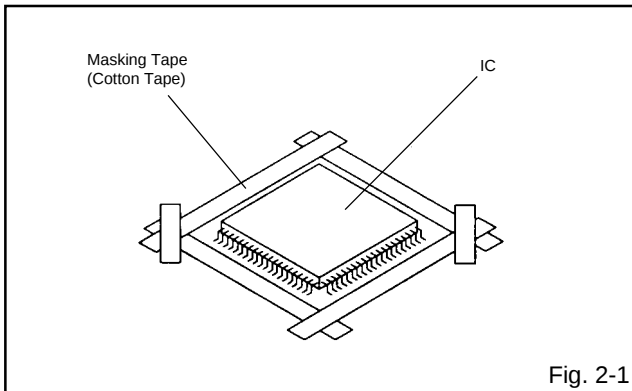
2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 2-1.)**

NOTE

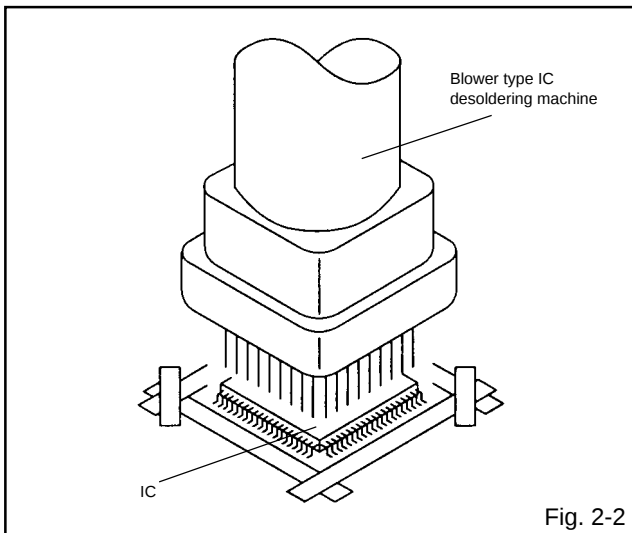
Masking is carried out on all the parts located within 10 mm distance from IC leads.



2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 2-2.)**

NOTE

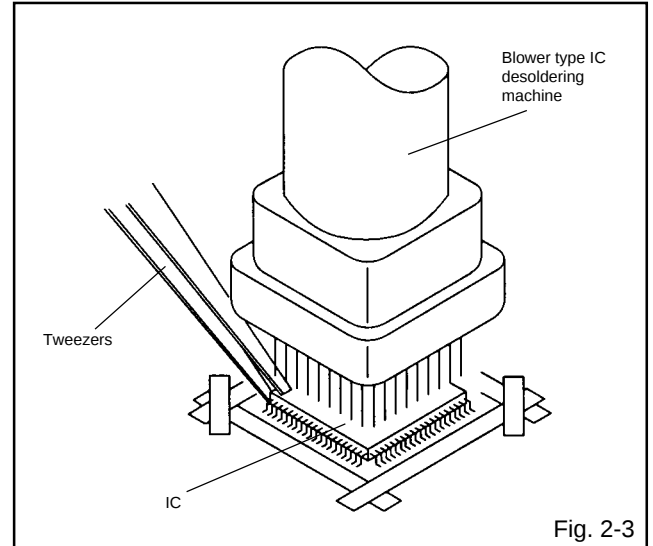
Do not rotate or move the IC back and forth, until IC can move back and forth easily after desoldering the leads completely.



3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 2-3.)**

NOTE

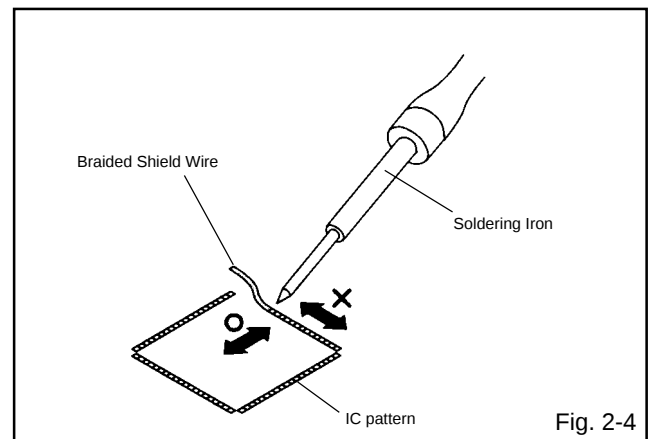
Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.



4. Peel off the Masking Tape.
5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 2-4.)**

NOTE

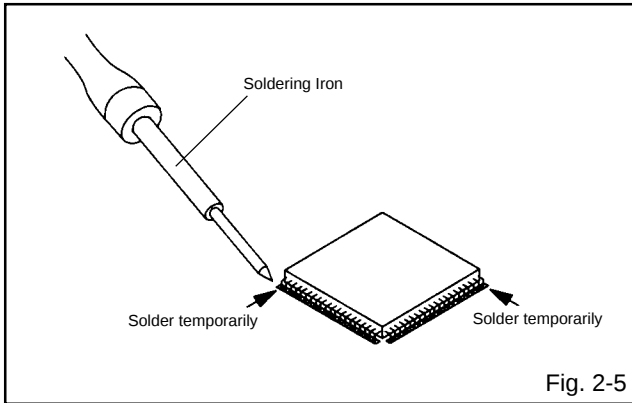
Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.



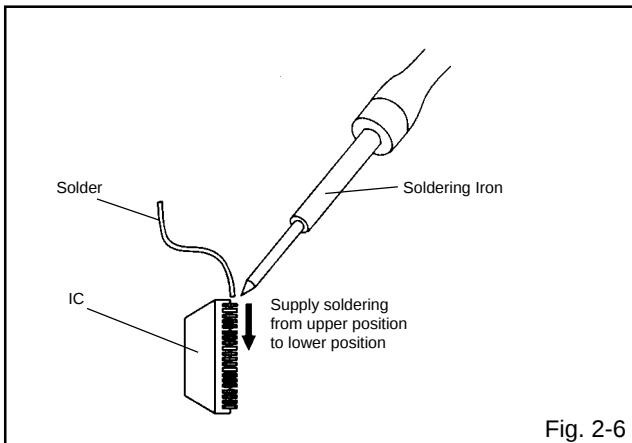
DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 2-5.)**



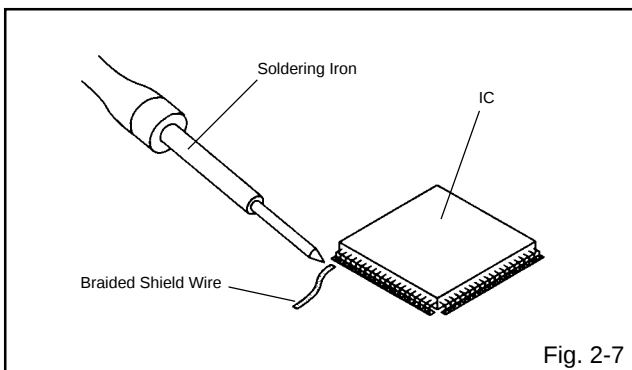
2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 2-6.)**



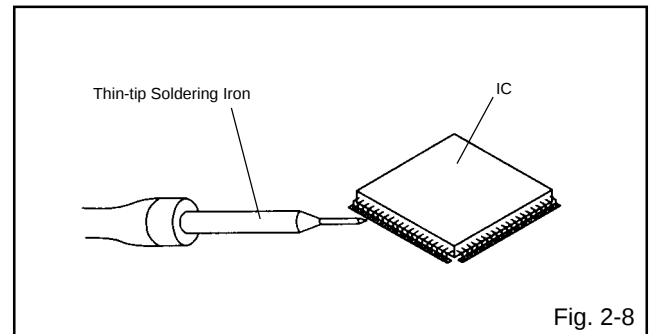
3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 2-7.)**

NOTE

Do not absorb the solder to excess.



4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 2-8.)**



5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass. Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

NOTE

When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

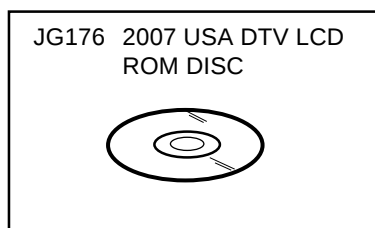
SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.

To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit and on the remote control for more than a the standard time in the appropriate condition. (See below chart.)

Set Condition	Set Key	Remocon Key	Standard Time	Operations
Power ON	VOL. DOWN (Minimum)	0	2 sec.	Releasing of V-CHIP PASSWORD.
Power ON	VOL. DOWN (Minimum)	1	2 sec.	Initialization of factory TV data. NOTE: If you set factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
Power ON	VOL. DOWN (Minimum)	6	2 sec.	POWER ON total hours are displayed on the screen. Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
Power ON	VOL. DOWN (Minimum)	8	2 sec.	Check of the SUM DATA and MICON VERSION on the screen. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
Power ON	VOL. DOWN (Minimum)	9	2 sec.	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

SERVICING FIXTURES AND TOOLS



Ref. No.	Part No.	Parts Name	Remarks
JG176	APJG176121	2007 USA DTV LCD ROM DISC	Up-Date of the Firmware

RE-WRITE FOR DIGITAL SOFT FIRMWARE

1. Copy the "update.dat" in CD to USB Flash Memory.

Recommended USB Flash Memory

- SanDisk Cruzer Mini USB Flash Drive 128Mb
- SanDisk Cruzer Mini USB Flash Drive 256Mb
- SanDisk Cruzer Micoro USB Flash Drive 128Mb
- SanDisk Cruzer Micoro USB Flash Drive 256Mb
- TwinMos ModileDisk3 128Mb (USB 2.0)
- TwinMos ModileDisk3 256Mb (USB 2.0)

NOTE: After Format is done with FAT32 File system beforehand, USB Flash Memory is used.
The computer of WINDOWS2000 is used.

2. Confirm that the AC cord is plugged out.
3. Set the minus driver to the topside of the USB connector cover, remove the USB connector cover. Insert the USB Flash Memory to USB connector. **(Refer to Fig.1)**

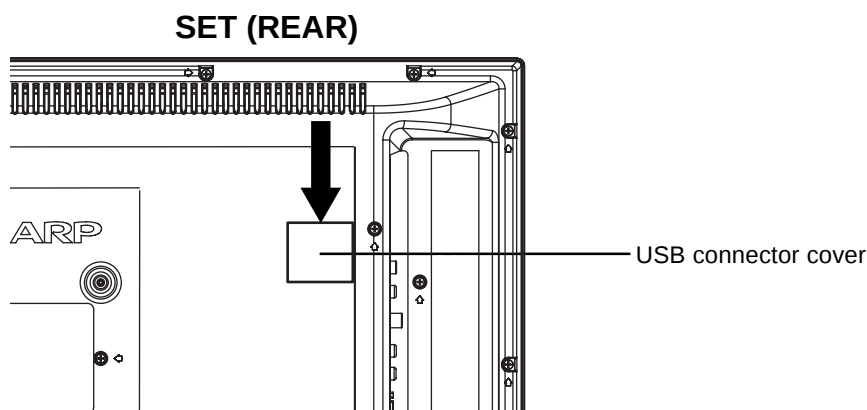


Fig.1

4. Insert the AC CORD of the set and turn on the power. The Up-Date will start automatically. During the writing, "PLEASE WAIT" will appear on the screen.
 5. After the Up-Date, the screen will return to normal screen.
 6. Turn off the power.
 7. Unplug the AC CORD, and remove the USB Flash Memory.
 8. Insert the AC CORD again.
- After the data input, set to the initializing of shipping.**
9. Turn on the power.
 10. Press both Channel button (1) on the remote control and the VOLUME DOWN button on the set for more than 2 seconds. The unit will now have the correct DATA for the new DIGITAL SOFT FIRMWARE.

WHEN REPLACING EEPROM (MEMORY) IC

CONFIRMATION OF CHECK SUM, POWER ON TOTAL HOURS AND MICON VERSION

Initial total of MEMORY IC, POWER ON total hours and MICON VERSION can be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".

Please refer to "CONFIRMATION OF INITIAL DATA" when SUM DATA is not corresponding.

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(8)** on the remote control for more than 2 seconds.
4. After the confirmation of each check sum, turn off the power.

NOTE: The each item value might be different according to each set.

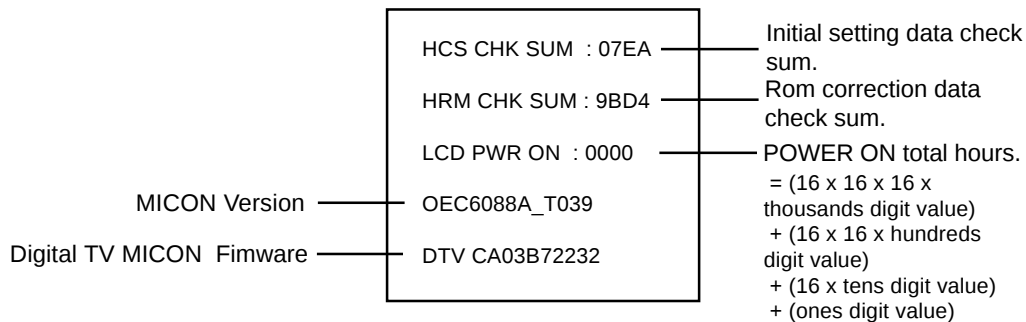


FIG. 1

CONFIRMATION OF INITIAL DATA

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to INITIAL SETTING TABLE (Attached "INITIAL DATA").

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds. ADDRESS and DATA should appear as FIG 2.

ADDRESS		DATA	
HCS	00	00	
HRM	0600	02	
OEC6088A_T039			
DTV	CA03B72232		

FIG. 2

4. ADDRESS is now selected and should "blink". Using the UP/DOWN button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
5. Press LEFT/RIGHT button to select DATA. When DATA is selected, it will "blink".
6. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
7. Pressing LEFT/RIGHT button will take you back to ADDRESS for further selection if necessary.
8. Repeat steps 4 to 6 until all data has been checked.
9. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

After the data input, set to the initializing of shipping.

10. Turn on the POWER.
 11. Set the VOLUME to minimum.
 12. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 2 seconds.
 13. After the finishing of the initializing of shipping, the unit will turn off automatically.
- The unit will now have the correct DATA for the new MEMORY IC.

ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor).

Prepare the following measurement tools for electrical adjustments.

1. Pattern Generator

On-Screen Display Adjustment

1. Set the VOLUME to minimum.
2. Press the VOL. DOWN button on the set and the channel button **(9)** on the remote control for more than 2 seconds to display adjustment mode on the screen as shown in **Fig. 1-1**.

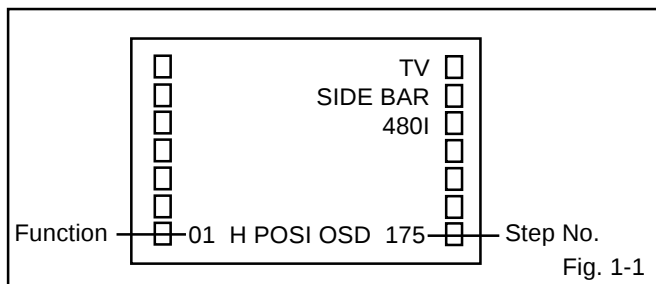


Fig. 1-1

3. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
4. Press the INPUT button on the remote control to end the adjustments.
5. To display the adjustment screen for TV, VIDEO1, VIDEO2, ColorStream HD, HDMI-0 and PC mode, press the INPUT button on the remote control. Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION
01	H POSI OSD	23	BAK LIGHT CENT
02	V POSI OSD	24	BAK LIGHT MAX
03	R DRIVE(N)	25	BAK LIGHT MIN
04	R CUT OFF(N)	26	BRIGHT CENT
05	G DRIVE(N)	27	BRIGHT MAX
06	G CUT OFF(N)	28	BRIGHT MIN
07	B DRIVE(N)	29	TINT
08	B CUT OFF(N)	30	SHARP CENT
09	R DRIVE(C)	31	SHARP MAX
10	R CUT OFF(C)	32	SHARP MIN
11	G DRIVE(C)	33	CONTRAST CENT
12	G CUT OFF(C)	34	CONTRAST MAX
13	B DRIVE(C)	35	CONTRAST MIN
14	B CUT OFF(C)	36	COLOR CENT
15	R DRIVE(W)	37	COLOR MAX
16	R CUT OFF(W)	38	COLOR MIN
17	G DRIVE(W)	39	CONTRAST 40
18	G CUT OFF(W)		
19	B DRIVE(W)		
20	B CUT OFF(W)		
21	H POSI 60Hz		
22	V POSI 60Hz		

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: CONTRAST MAX

1. Receive the monoscope pattern. (RF Input)
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(34)** on the remote control to select "CONTRAST MAX".
4. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "150"
5. Check if the picture is normal.
6. Receive the monoscope pattern. (VIDEO Input)
7. Press the INPUT button on the remote control to set to the AV mode.
8. Using the remote control, set the brightness and contrast to normal position.
9. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(34)** on the remote control to select "CONTRAST MAX".
10. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "150".
11. Check if the picture is normal.
12. Playback the DVD(480i) disc. (COMPONENT Input)
13. Press the INPUT button on the remote control to set to the COLOR STREAM HD mode.
14. Using the remote control, set the brightness and contrast to normal position.
15. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(34)** on the remote control to select "CONTRAST MAX".
16. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "154".
17. Playback the DVD(480i) disc. (HDMI Input)
18. Press the INPUT button on the remote control to set to the HDMI mode.
19. Using the remote control, set the brightness and contrast to normal position.
20. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(34)** on the remote control to select "CONTRAST MAX".
21. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "139".
22. Check if the picture is normal.

ELECTRICAL ADJUSTMENTS

2-2: WHITE BALANCE

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Press the INPUT button on the remote control to set to the AV mode.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(03)** on the remote control to select "R DRIVE(N)".
6. Press the CH. UP/DOWN button on the remote control to select the "R CUT OFF(N)", "B DRIVE(N)", "B CUT OFF(N)", "R DRIVE(C)", "R CUT OFF(C)", "B DRIVE(C)", "B CUT OFF(C)", "R DRIVE(W)", "R CUT OFF(W)", "B DRIVE(W)" or "B CUT OFF(W)".
7. Adjust the LEFT/RIGHT button on the remote control to whiten the R CUT OFF(N), B DRIVE(N), B CUT OFF(N), R DRIVE(C), R CUT OFF(C)", B DRIVE(C), B CUT OFF(C), R DRIVE(W), R CUT OFF(W), B DRIVE(W) or B CUT OFF(W) at each step tone sections equally.
8. Perform the above adjustments 5 and 6 until the white achieved.

2-3: BRIGHT CENT

1. Receive the monoscope pattern. (VIDEO Input)
2. Press the INPUT button on the remote control to set to the AV mode.
3. Set the screen mode to FULL.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(26)** on the remote control to select "BRIGHT CENT".
6. Press the LEFT/RIGHT button on the remote control until the screen begin to shine.
7. Receive the monoscope pattern. (RF Input)
8. Press the INPUT button on the remote control to set to the ANT mode. Then perform the the above adjustments 4~6.
9. Playback the DVD(480i) disc. (COMPONENT Input)
10. Press the INPUT button on the remote control to set to the COLORSTREAM HD mode. Then perform the the above adjustments 4~6.
11. Playback the DVD(480i) disc. (HDMI Input)
12. Press the INPUT button on the remote control to set to the HDMI mode. Then perform the the above adjustments 4~6.

2-4: CONTRAST 40

1. Receive the monoscope pattern. (RF Input)
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(39)** on the remote control to select "CONTRAST 40".
4. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "144"
5. Check if the picture is normal.
6. Receive the monoscope pattern. (VIDEO Input)
7. Press the INPUT button on the remote control to set to the AV mode.
8. Using the remote control, set the brightness and contrast to normal position.
9. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(39)** on the remote control to select "CONTRAST 40".
10. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "143".
11. Check if the picture is normal.
12. Playback the DVD(480i) disc. (COMPONENT Input)
13. Press the INPUT button on the remote control to set to the COLORSTREAM HD mode.
14. Using the remote control, set the brightness and contrast to normal position.
15. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(39)** on the remote control to select "CONTRAST 40".
16. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "147".
17. Playback the DVD(480i) disc. (HDMI Input)
18. Press the INPUT button on the remote control to set to the HDMI mode.
19. Using the remote control, set the brightness and contrast to normal position.
20. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(39)** on the remote control to select "CONTRAST 40".
21. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "132".
22. Check if the picture is normal.

ELECTRICAL ADJUSTMENTS

2-5: CONTRAST CENT

1. Receive the monoscope pattern. (RF Input)
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(33)** on the remote control to select "CONTRAST CENT".
4. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "115"
5. Check if the picture is normal.
6. Receive the monoscope pattern. (VIDEO Input)
7. Press the INPUT button on the remote control to set to the AV mode.
8. Using the remote control, set the brightness and contrast to normal position.
9. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(33)** on the remote control to select "CONTRAST CENT".
10. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "113".
11. Check if the picture is normal.
12. Playback the DVD(480i) disc. (COMPONENT Input)
13. Press the INPUT button on the remote control to set to the COLORSTREAM HD mode.
14. Using the remote control, set the brightness and contrast to normal position.
15. Activate the adjustment mode display of **Fig. 2-1** and press the channel button **(33)** on the remote control to select "CONTRAST CENT".
16. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "118".
17. Playback the DVD(480i) disc. (HDMI Input)
18. Press the INPUT button on the remote control to set to the HDMI mode.
19. Using the remote control, set the brightness and contrast to normal position.
20. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(33)** on the remote control to select "CONTRAST CENT".
21. Press the LEFT/RIGHT button on the remote control until the contrast step No. becomes "103".
22. Check if the picture is normal.

ELECTRICAL ADJUSTMENTS

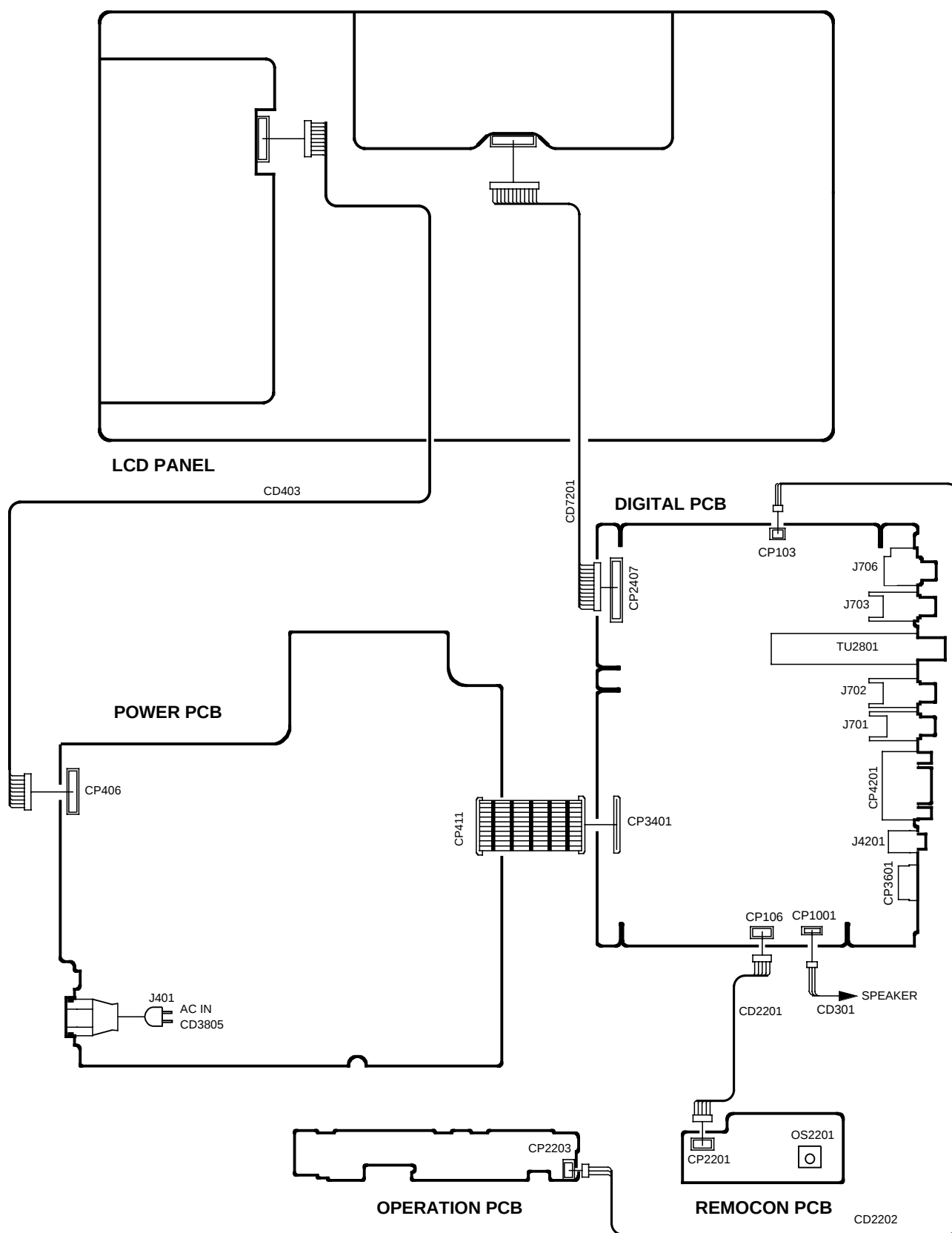
2-6: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of each of the adjustment item is set correctly referring below.
(AV/ANALOG TUNER/YUV/HDMI/PC/DIGITAL)

NO.	FUNCTION	AV		ANALOG TUNER	YUV				HDMI					PC								DIGITAL			
		CVBS	S(Y/C)		480i	480p	720p	108i	VGA	480i	480p	720p	1080i									480i	480p	720p	108i
		Step No.	Step No.		Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.
1	H POSI OSD	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
2	V POSI OSD	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
3	R.DRIVE (N)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	128	128	128	128	128	128	128	ADJ	ADJ	ADJ	ADJ	ADJ
4	R CUTOFF (N)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	139	139	139	139	139	139	139	ADJ	ADJ	ADJ	ADJ	ADJ
5	G DRIVE (N)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	ADJ	ADJ	ADJ	ADJ	ADJ
6	G CUTOFF (N)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
7	B DRIVE (N)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	128	128	128	128	128	128	128	ADJ	ADJ	ADJ	ADJ	ADJ
8	B CUTOFF (N)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	131	131	131	131	131	131	131	ADJ	ADJ	ADJ	ADJ	ADJ
9	R.DRIVE (C)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	129	129	129	129	129	129	129	ADJ	ADJ	ADJ	ADJ	ADJ
10	R CUTOFF (C)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	138	138	138	138	138	138	138	ADJ	ADJ	ADJ	ADJ	ADJ
11	G DRIVE (C)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
12	G CUTOFF (C)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
13	B DRIVE (C)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	133	133	133	133	133	133	133	ADJ	ADJ	ADJ	ADJ	ADJ
14	B CUTOFF (C)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	131	131	131	131	131	131	131	ADJ	ADJ	ADJ	ADJ	ADJ
15	R.DRIVE (W)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	150	150	150	150	150	150	150	ADJ	ADJ	ADJ	ADJ	ADJ
16	R CUTOFF (W)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	141	141	141	141	141	141	141	ADJ	ADJ	ADJ	ADJ	ADJ
17	G DRIVE (W)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
18	G CUTOFF (W)	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
19	B DRIVE (W)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	89	89	89	89	89	89	89	ADJ	ADJ	ADJ	ADJ	ADJ
20	B CUTOFF (W)	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	137	137	137	137	137	137	137	ADJ	ADJ	ADJ	ADJ	ADJ
21	H POSI 60	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256
22	V POSI 60	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
23	BAK LIGHT CENT	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
24	BAK LIGHT MAX	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
25	BAK LIGHT MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	BRIGHT CENT	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	127	127	127	108	127	127	127	ADJ	ADJ	ADJ	ADJ	ADJ
27	BRIGHT MAX	135	135	135	135	155	155	155	145	145	145	145	145	152	152	152	152	152	152	152	135	35	135	135	135
28	BRIGHT MIN	80	80	80	80	100	100	100	90	90	90	90	90	102	102	102	102	102	102	102	80	80	80	80	80
29	TINT	127	128	125	127	126	125	125	127	127	127	127	127	124	124	124	124	124	124	124	124	123	123	123	123
30	SHARP CENTER	180	180	180	180	180	180	180	180	180	180	180	180	40	40	40	40	40	40	40	150	150	150	150	150
31	SHARP MAX	250	250	220	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	255
32	SHARP MIN	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	50	50	50	50	50
33	CONT CENTER	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	95	95	95	110	95	95	95	ADJ	ADJ	ADJ	ADJ	ADJ
34	CONT MAX	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	126	126	126	145	126	126	126	ADJ	ADJ	ADJ	ADJ	ADJ
35	CONT MIN	85	85	85	80	60	60	60	70	70	70	70	70	50	50	50	100	50	50	50	85	85	85	85	85
36	COLOR CENT	141	142	149	155	177	183	178	165	165	165	165	165	128	128	128	128	128	128	128	128	128	128	128	128
37	COLOR MAX	182	182	182	182	192	222	217	197	197	197	197	197	172	172	172	172	172	172	172	172	172	172	172	172
38	COLOR MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	CONT 40	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	ADJ	119	119	119	119	119	119	119	ADJ	ADJ	ADJ	ADJ	ADJ

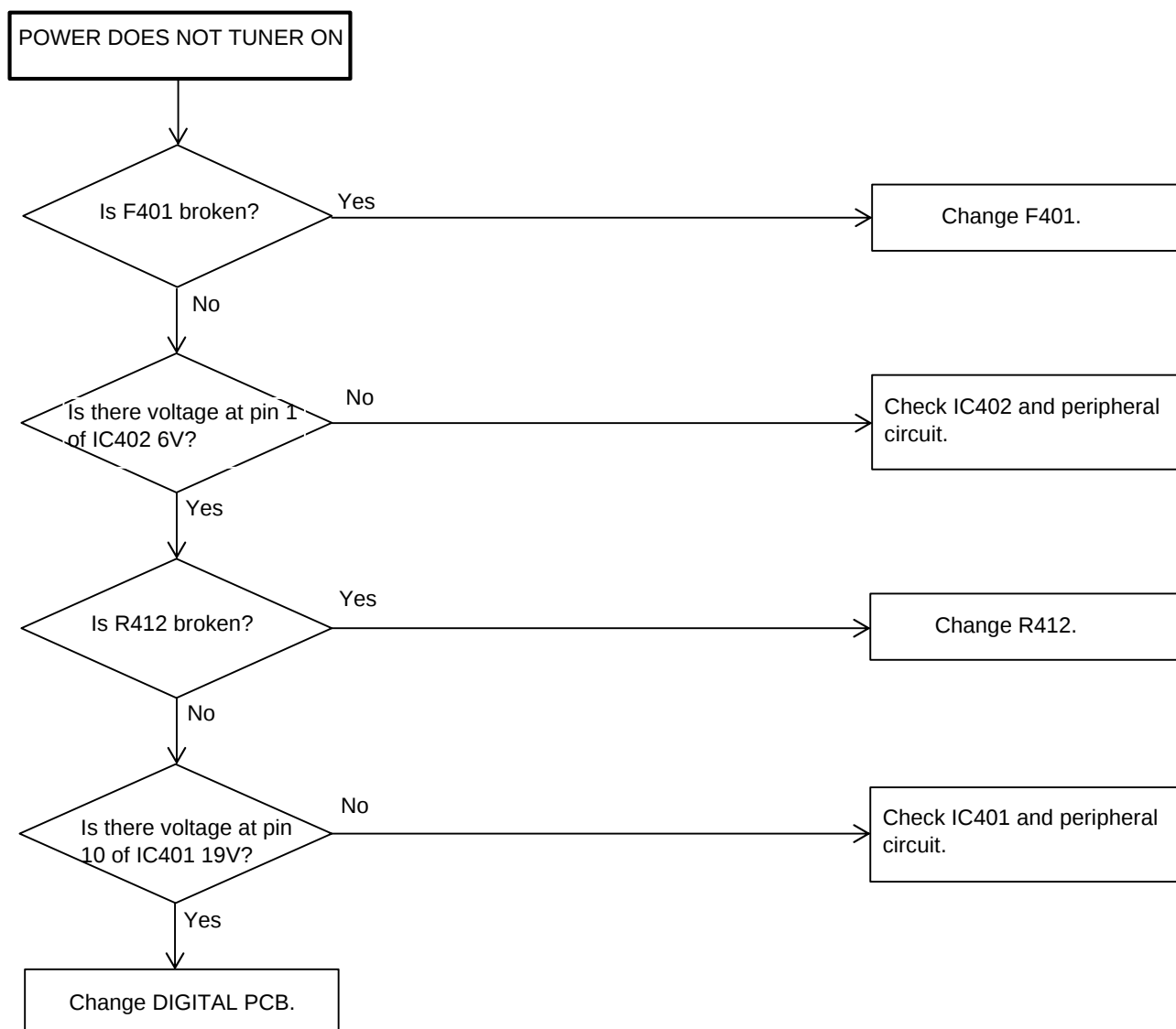
ELECTRICAL ADJUSTMENTS

3. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)

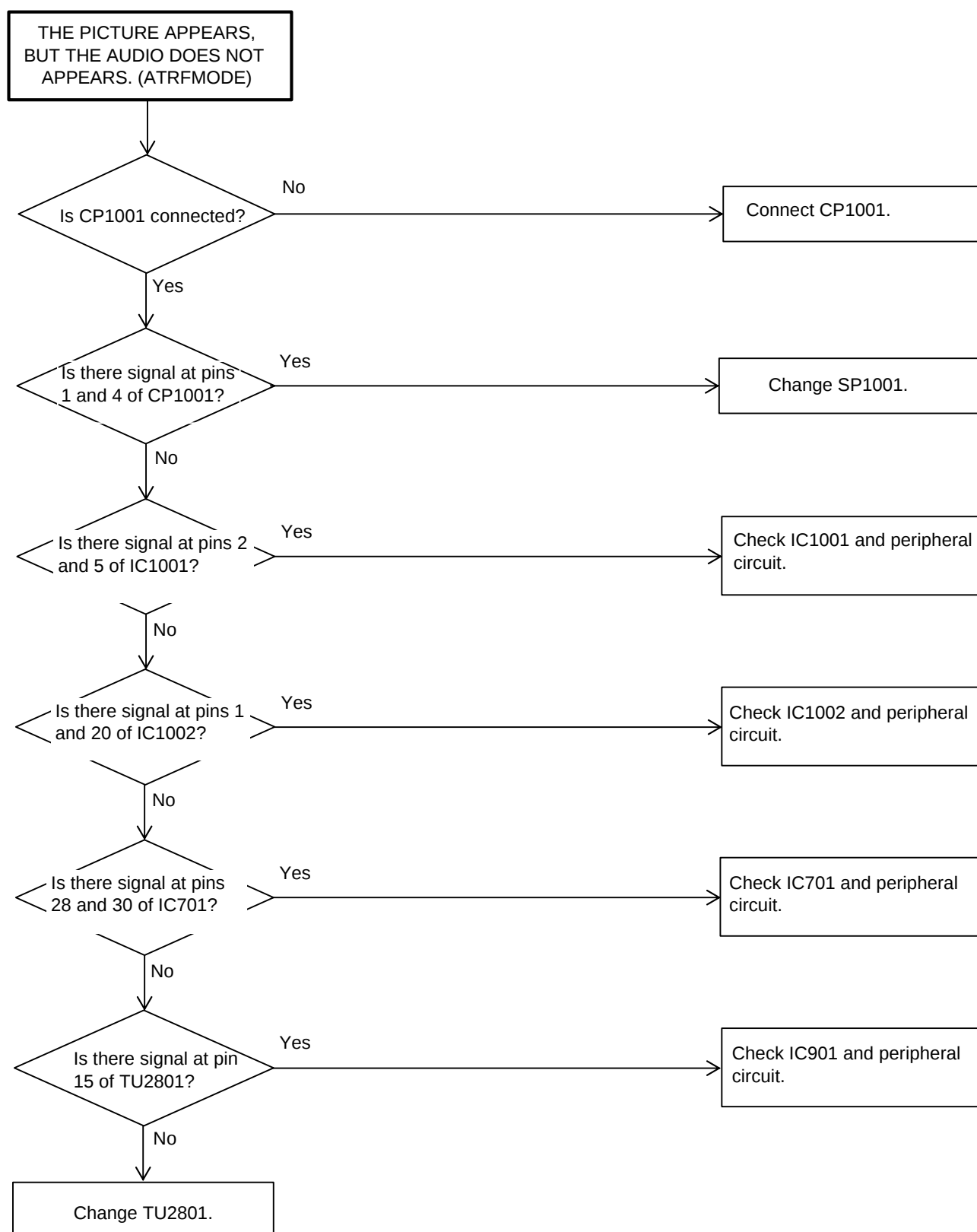


TROUBLESHOOTING GUIDE

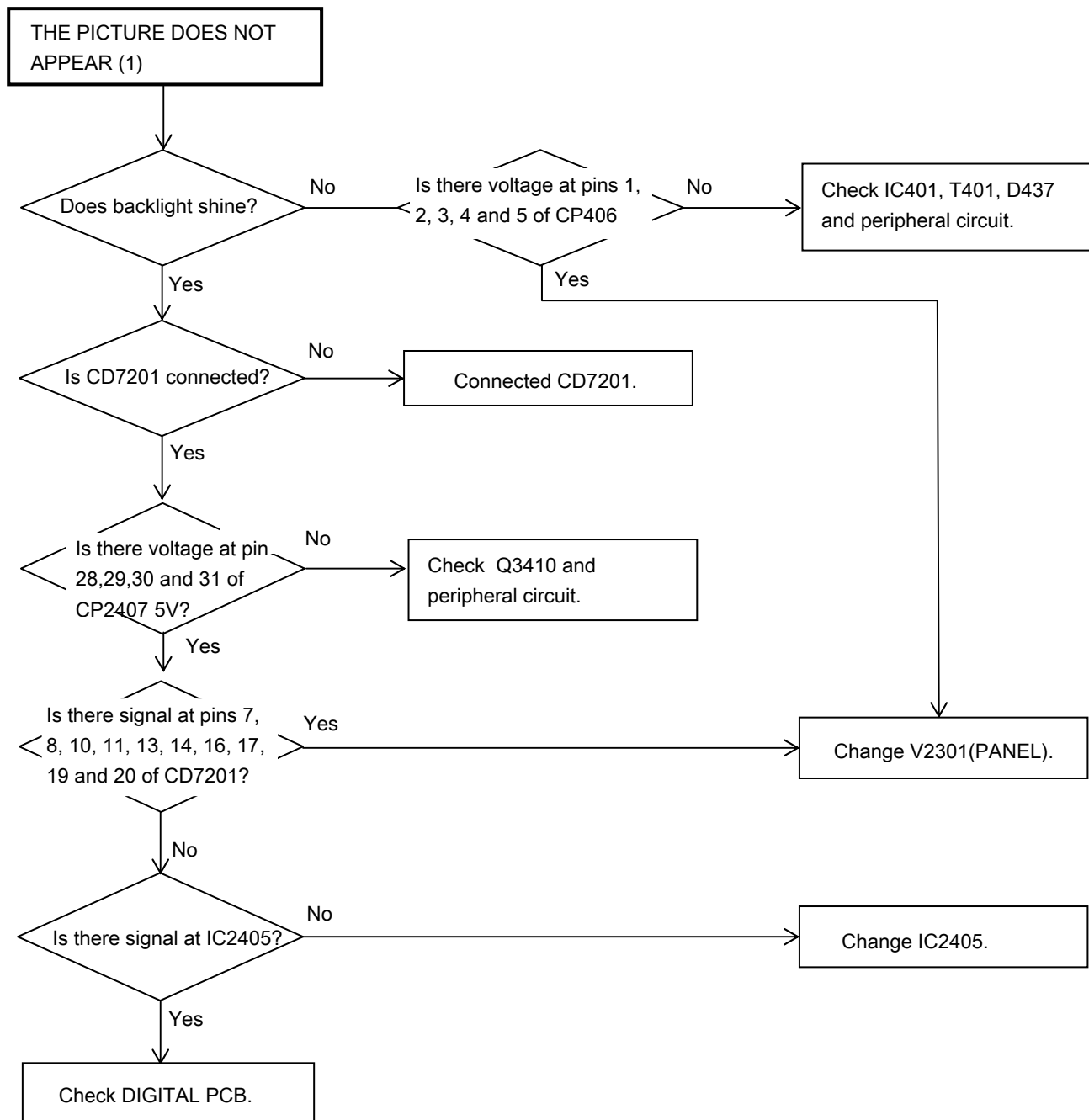
(LCD SECTION)



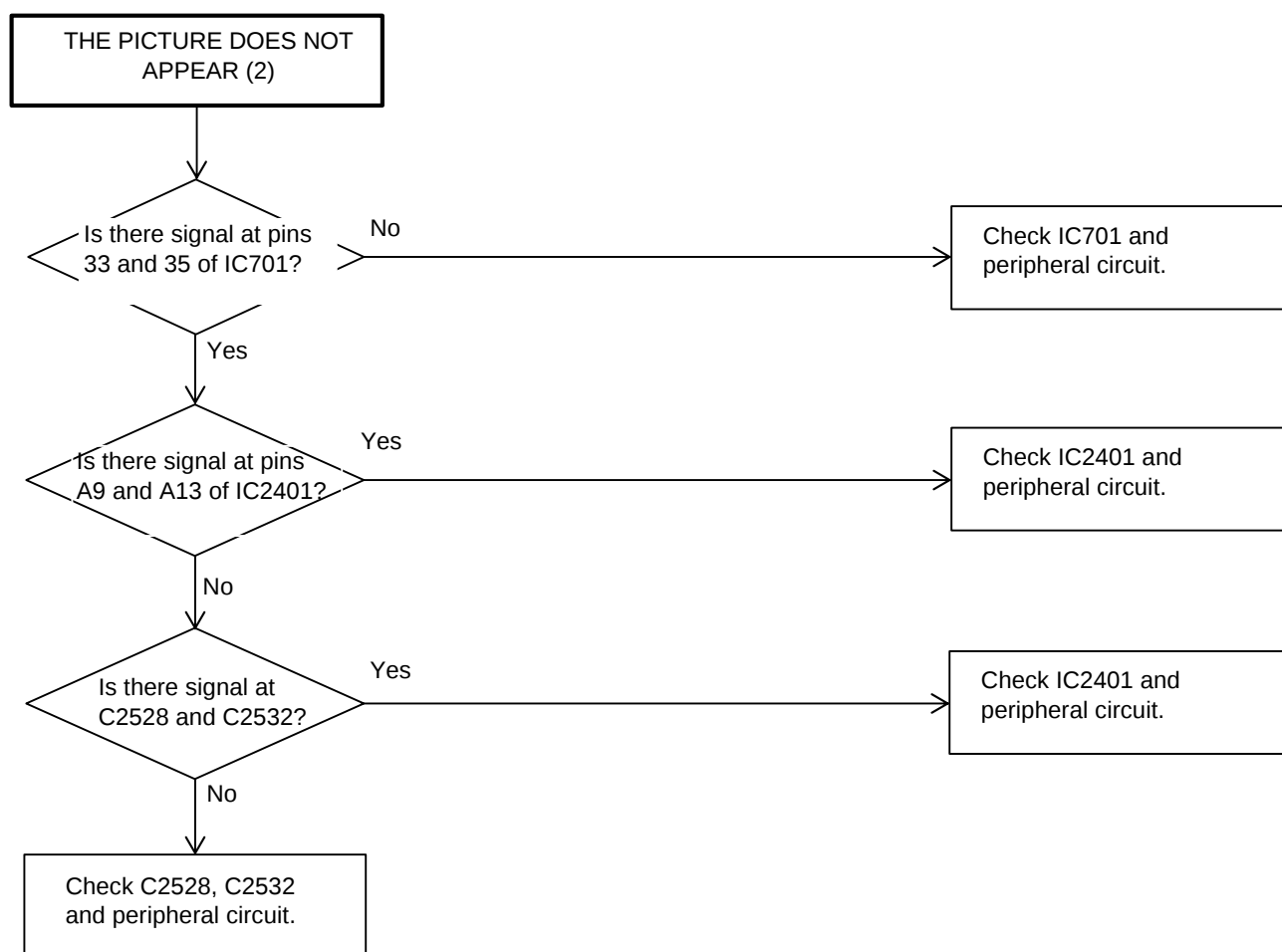
TROUBLESHOOTING GUIDE



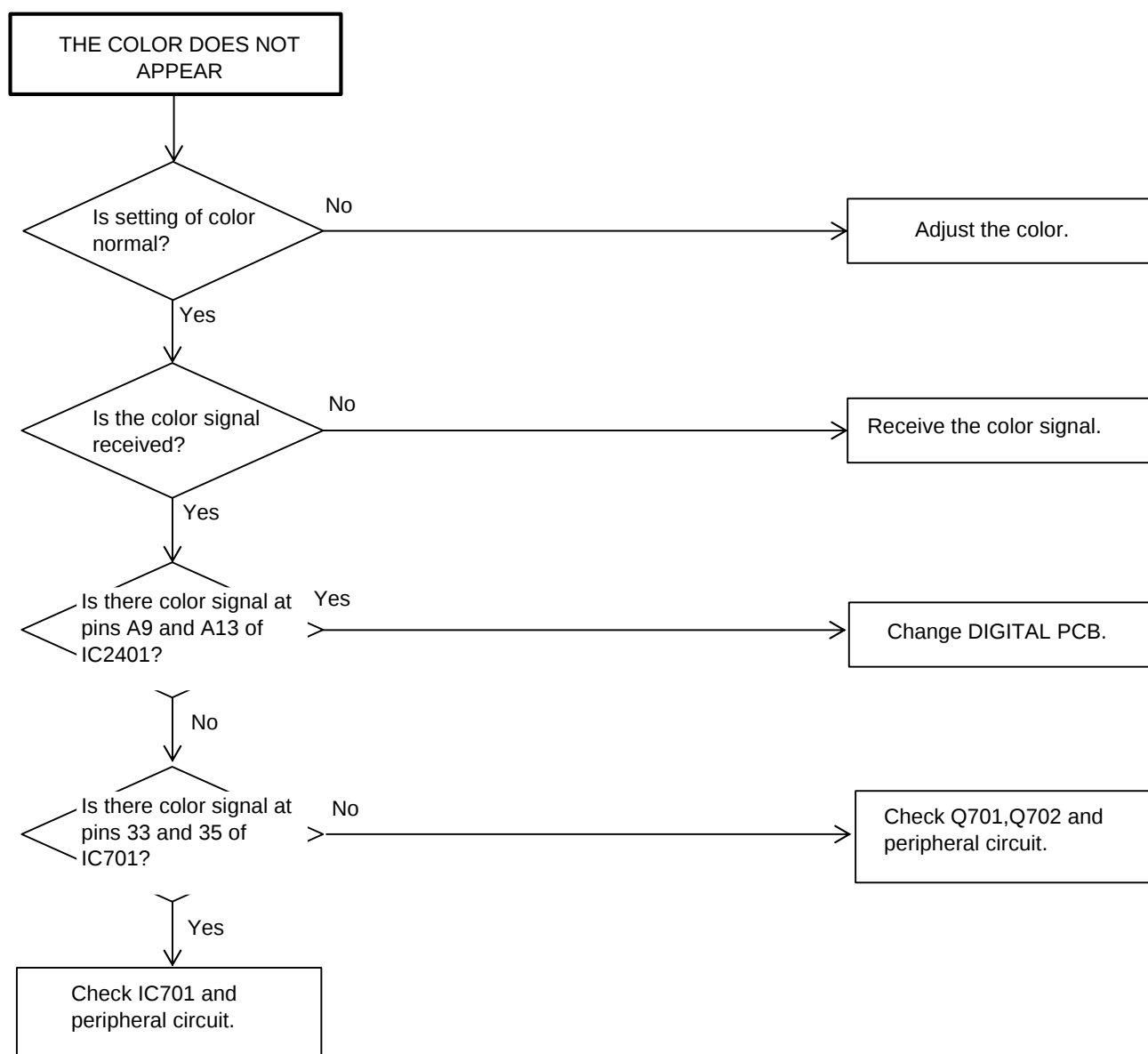
TROUBLESHOOTING GUIDE



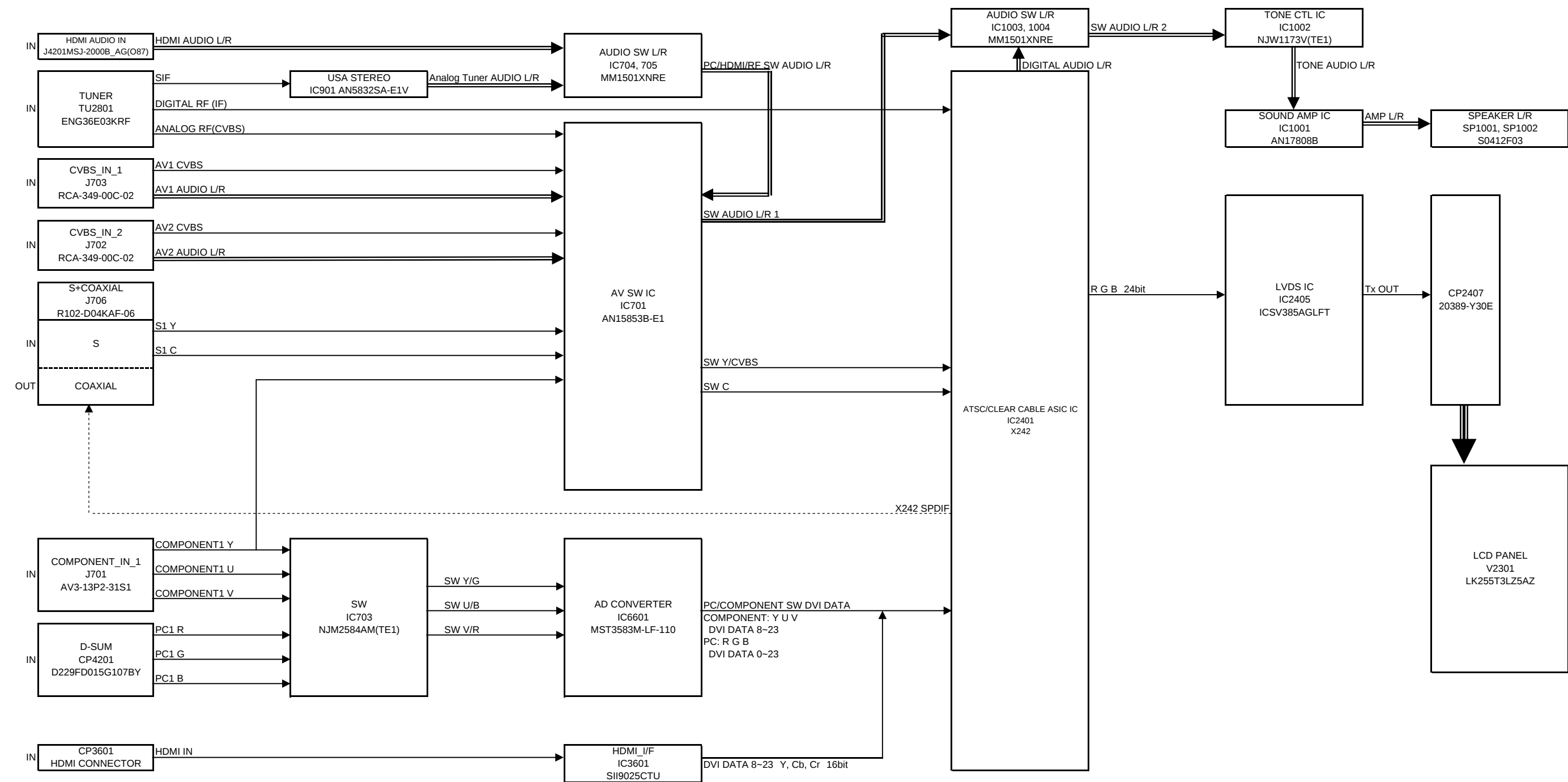
TROUBLESHOOTING GUIDE



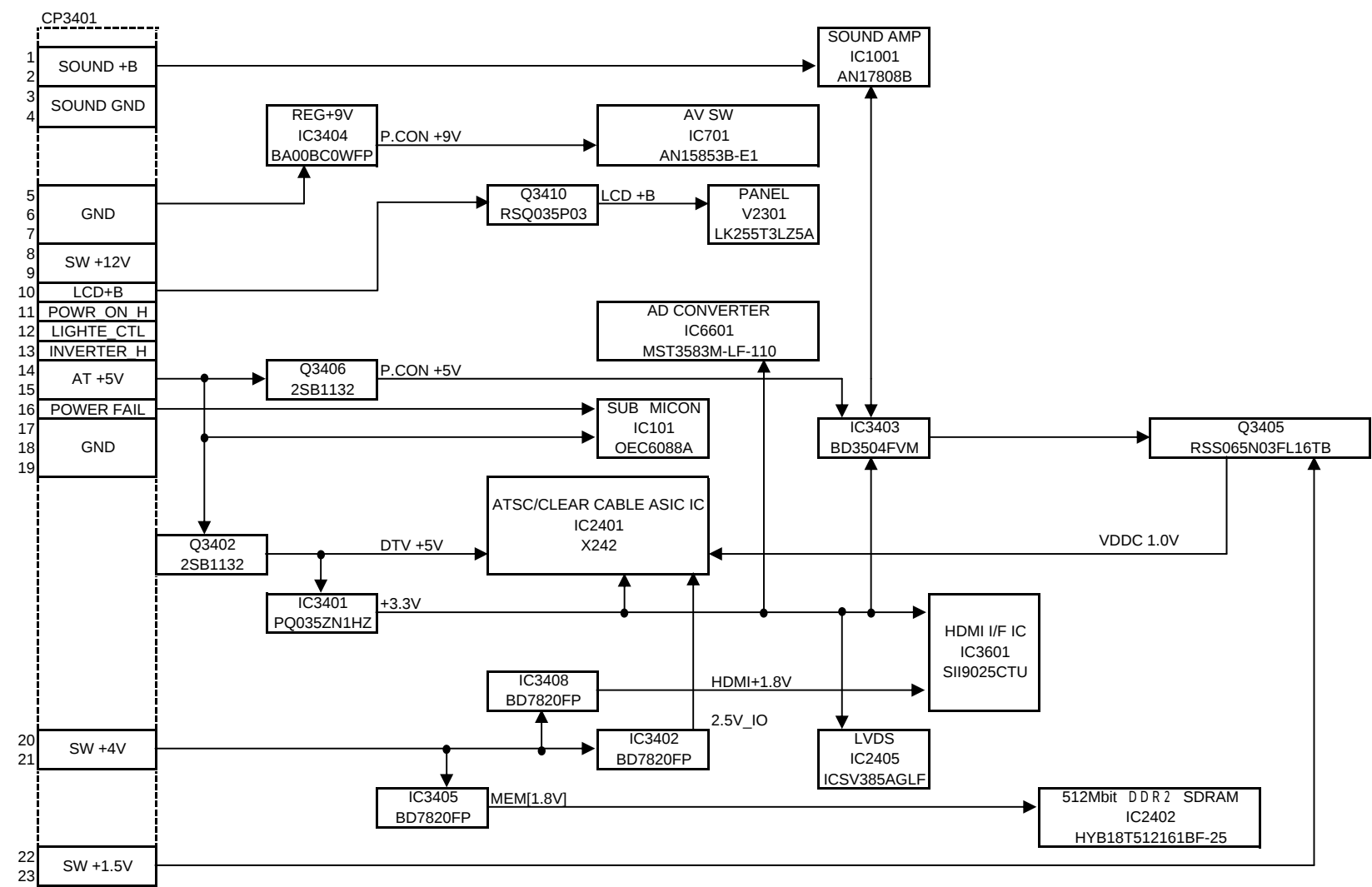
TROUBLESHOOTING GUIDE



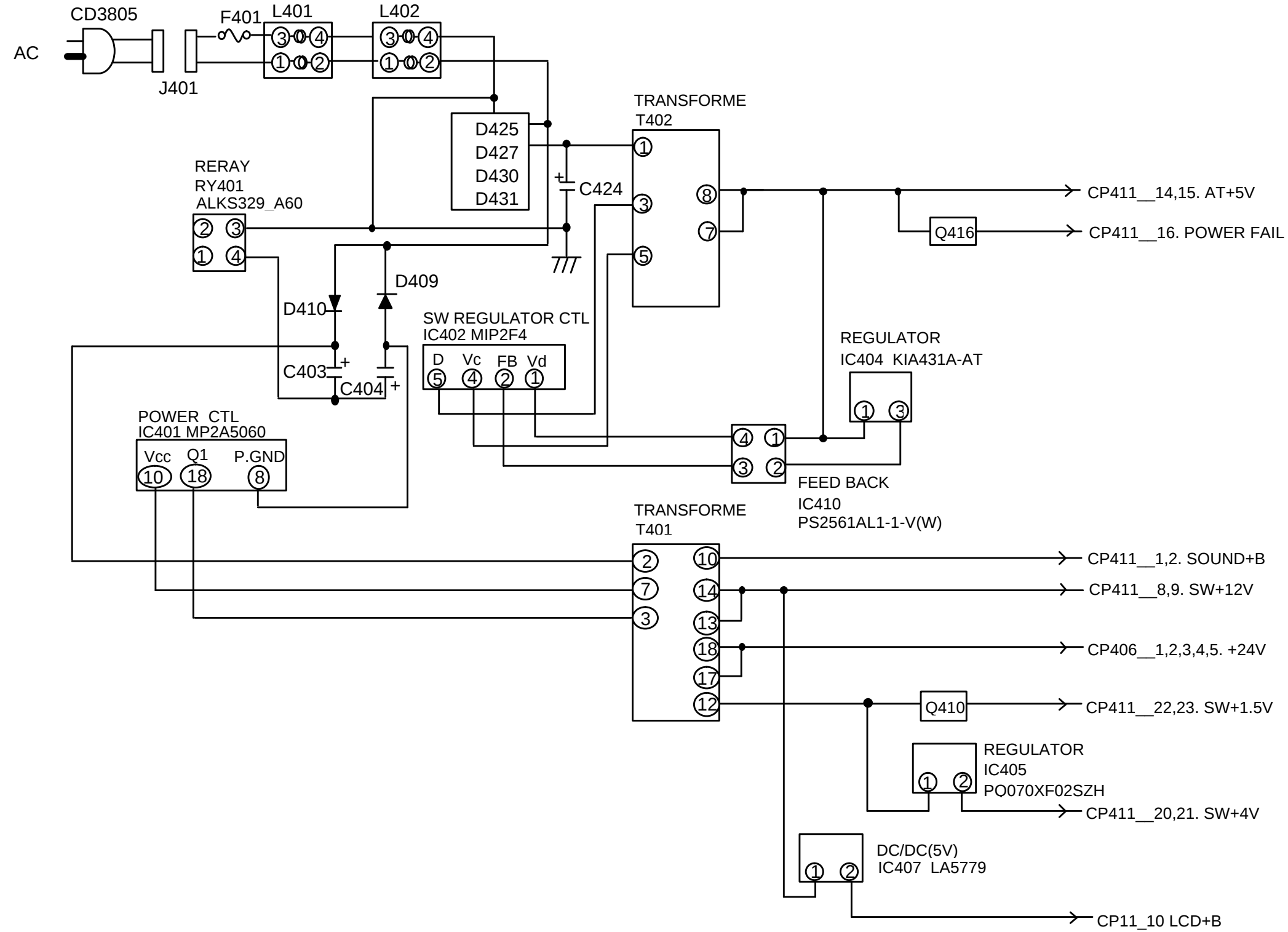
DIGITAL BLOCK DIAGRAM



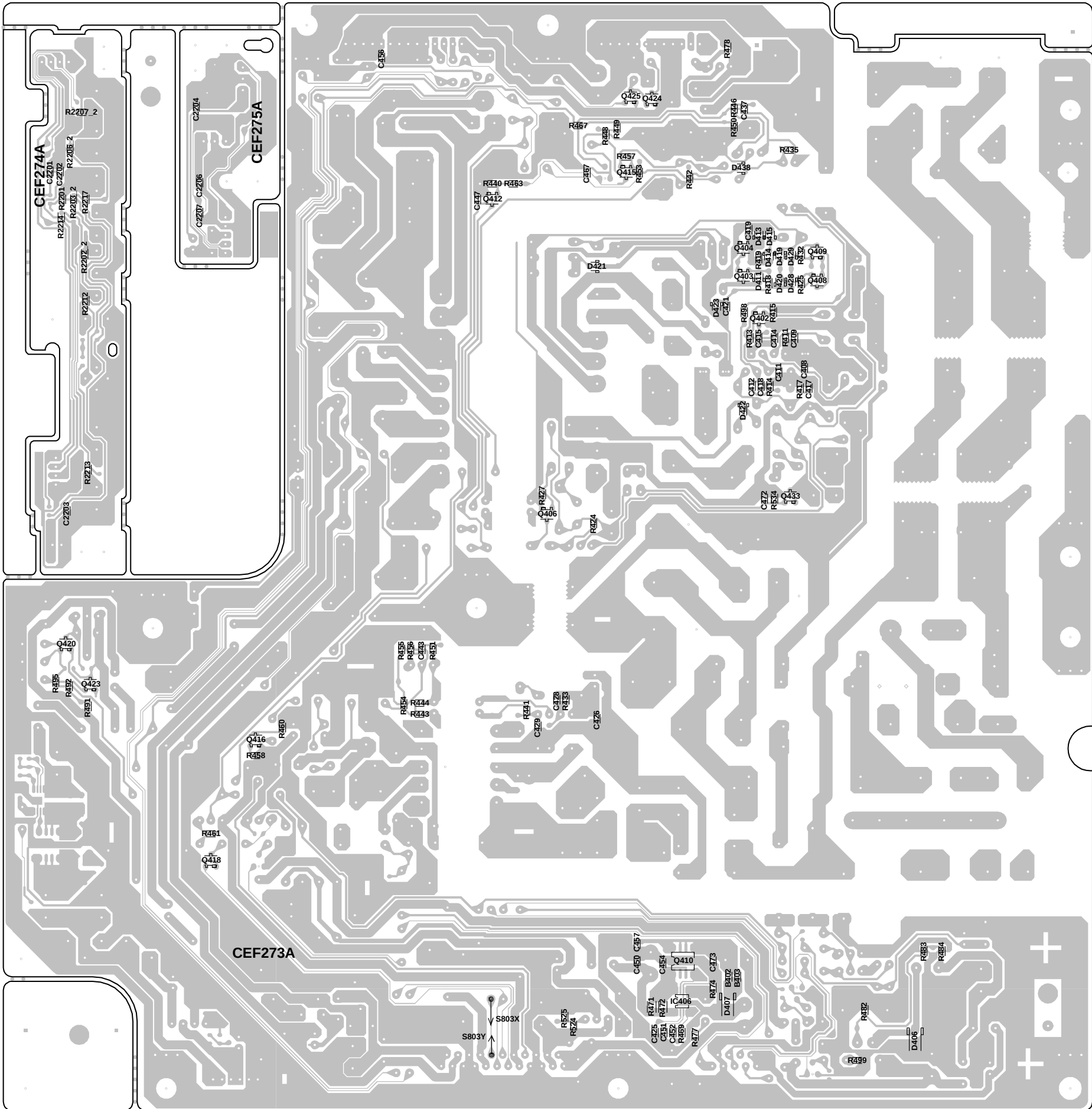
POWER(DIGITAL PCB) BLOCK DIAGRAM



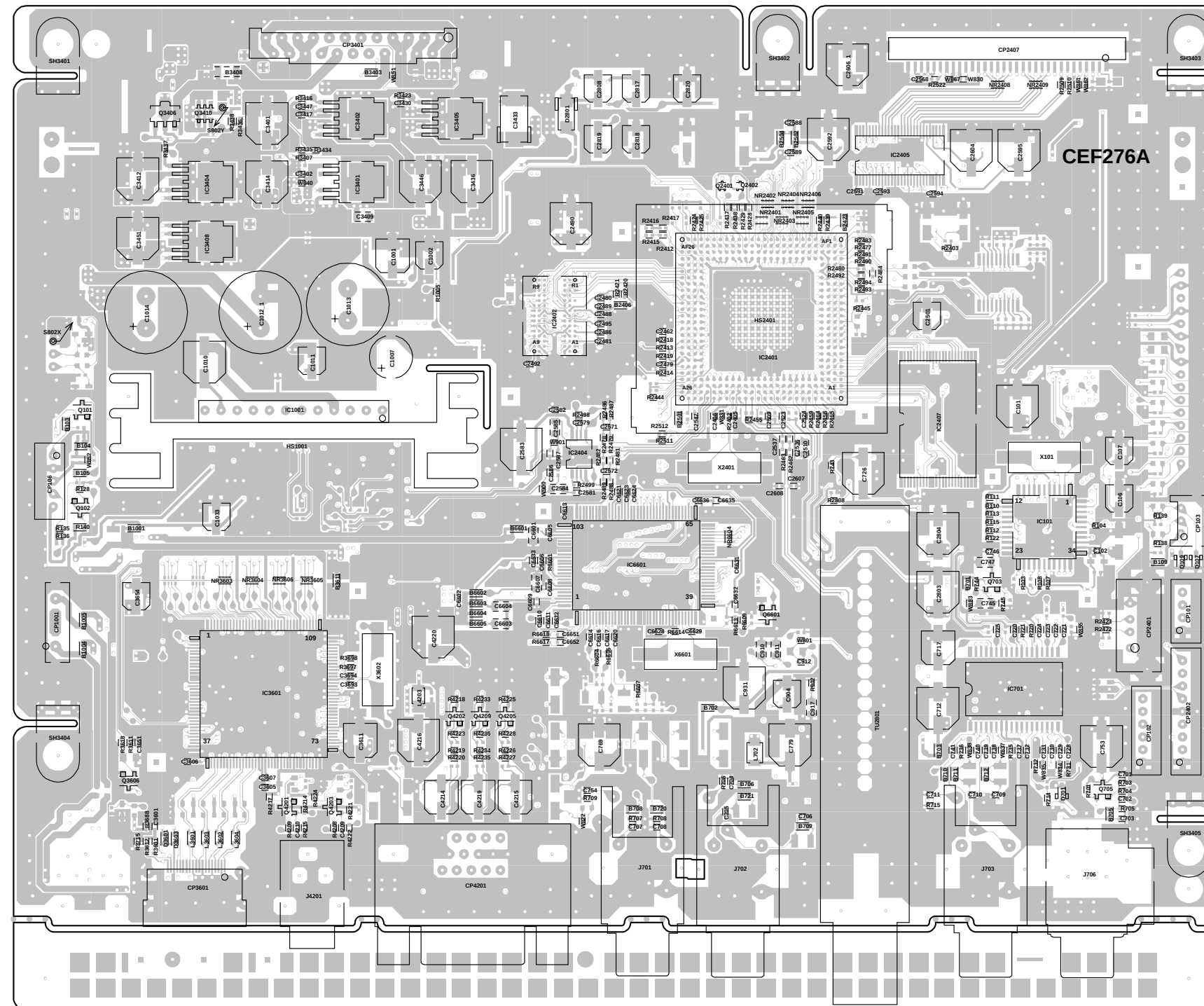
POWER BLOCK DIAGRAM



**PRINTED CIRCUIT BOARDS
POWER/OPERATION/REMOCON (CHIP MOUNTED PARTS)
SOLDER SIDE**

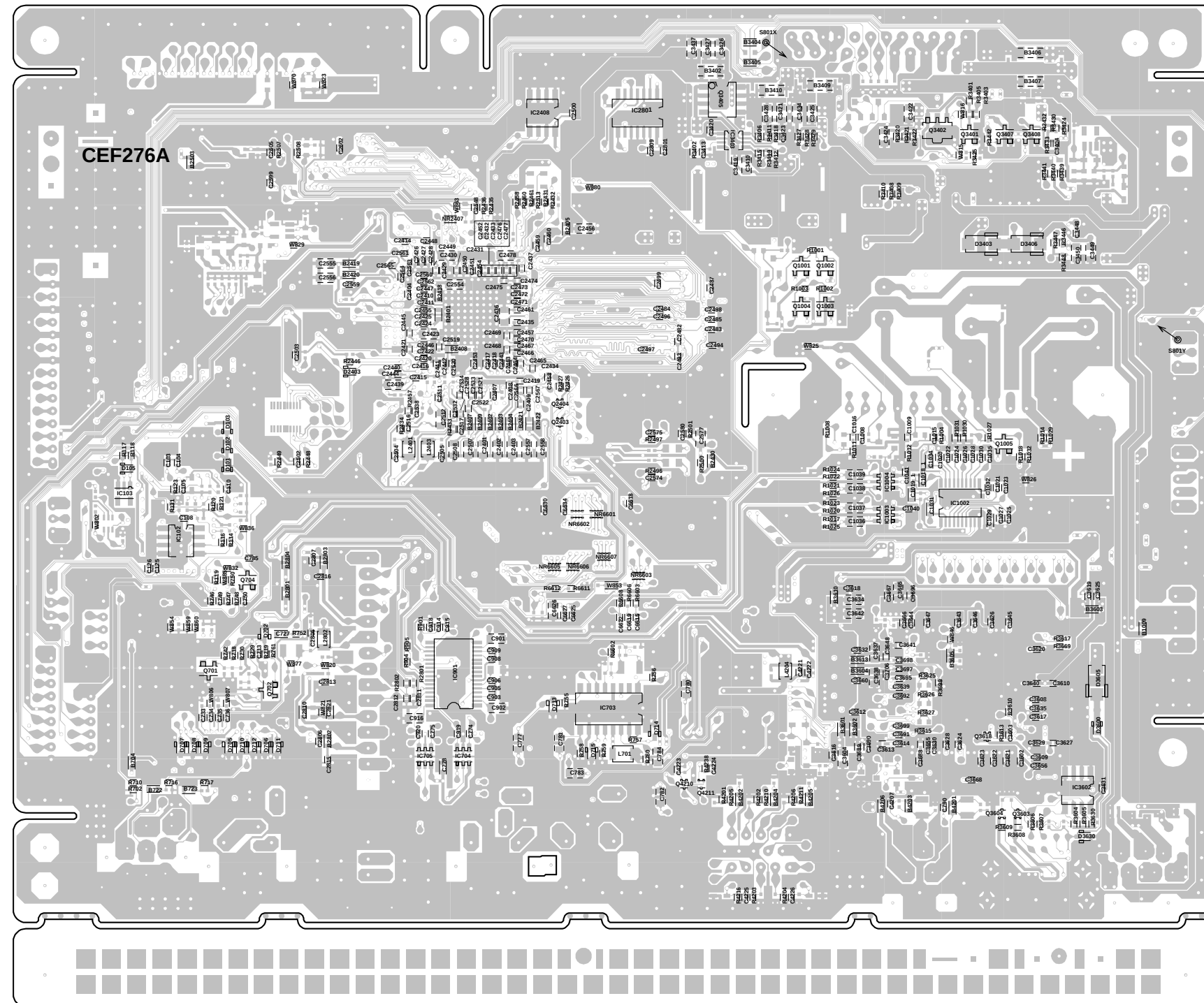


DIGITAL (TOP SIDE)



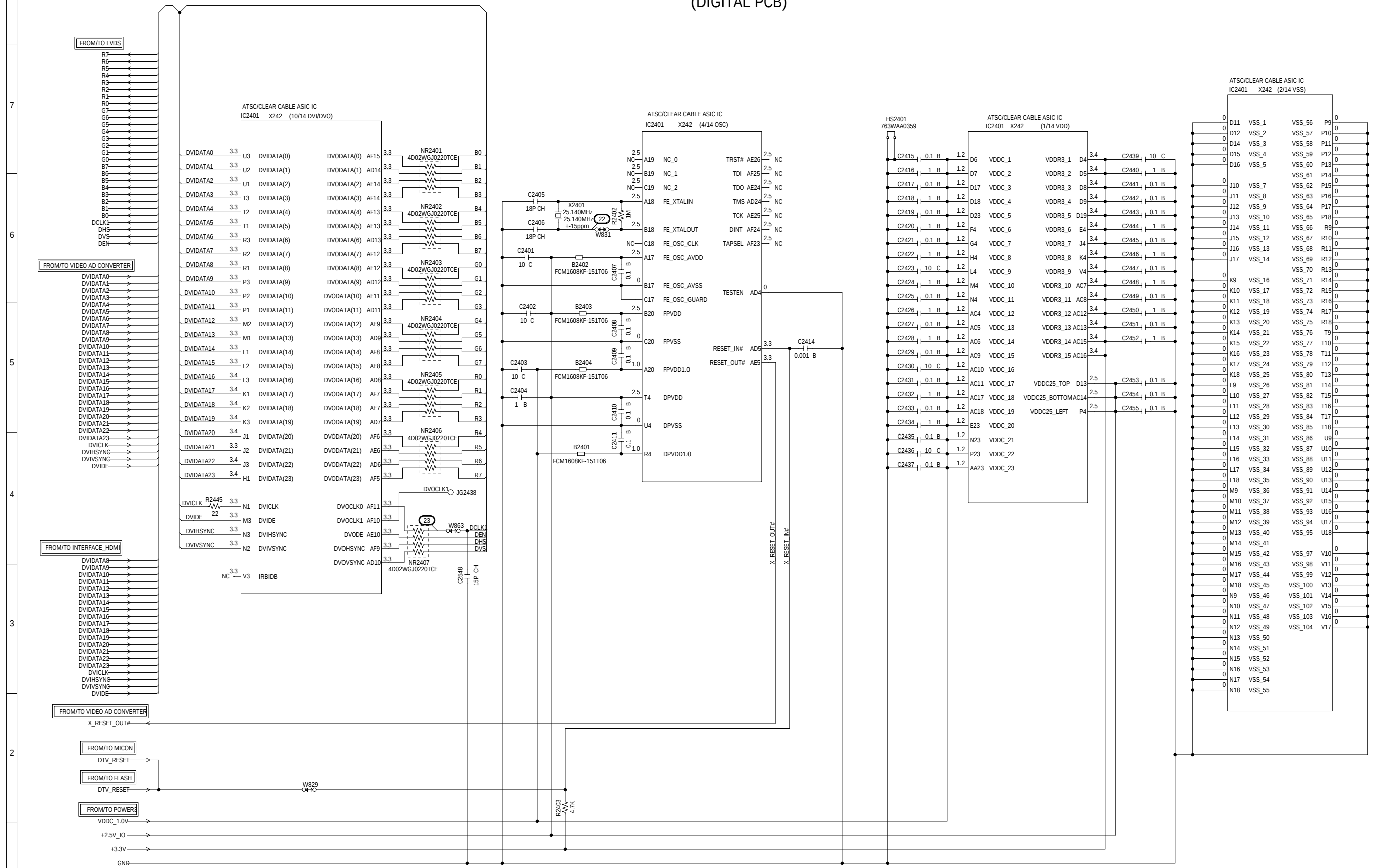
PRINTED CIRCUIT BOARDS

DIGITAL (BOTTOM SIDE)



ASIC SCHEMATIC DIAGRAM

(DIGITAL PCB)

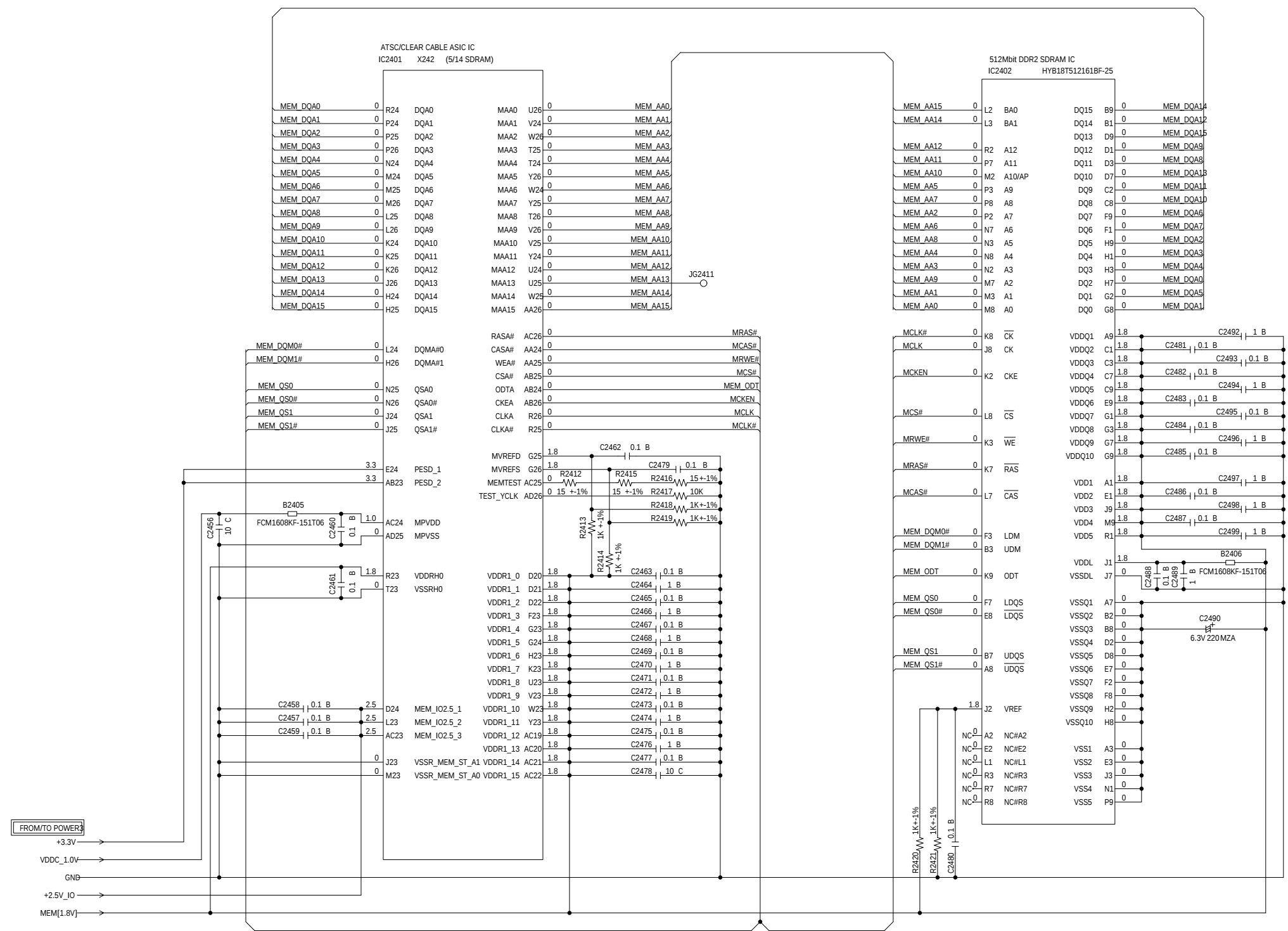


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBDH0
CE276

SDRAM SCHEMATIC DIAGRAM
(DIGITAL PCB)



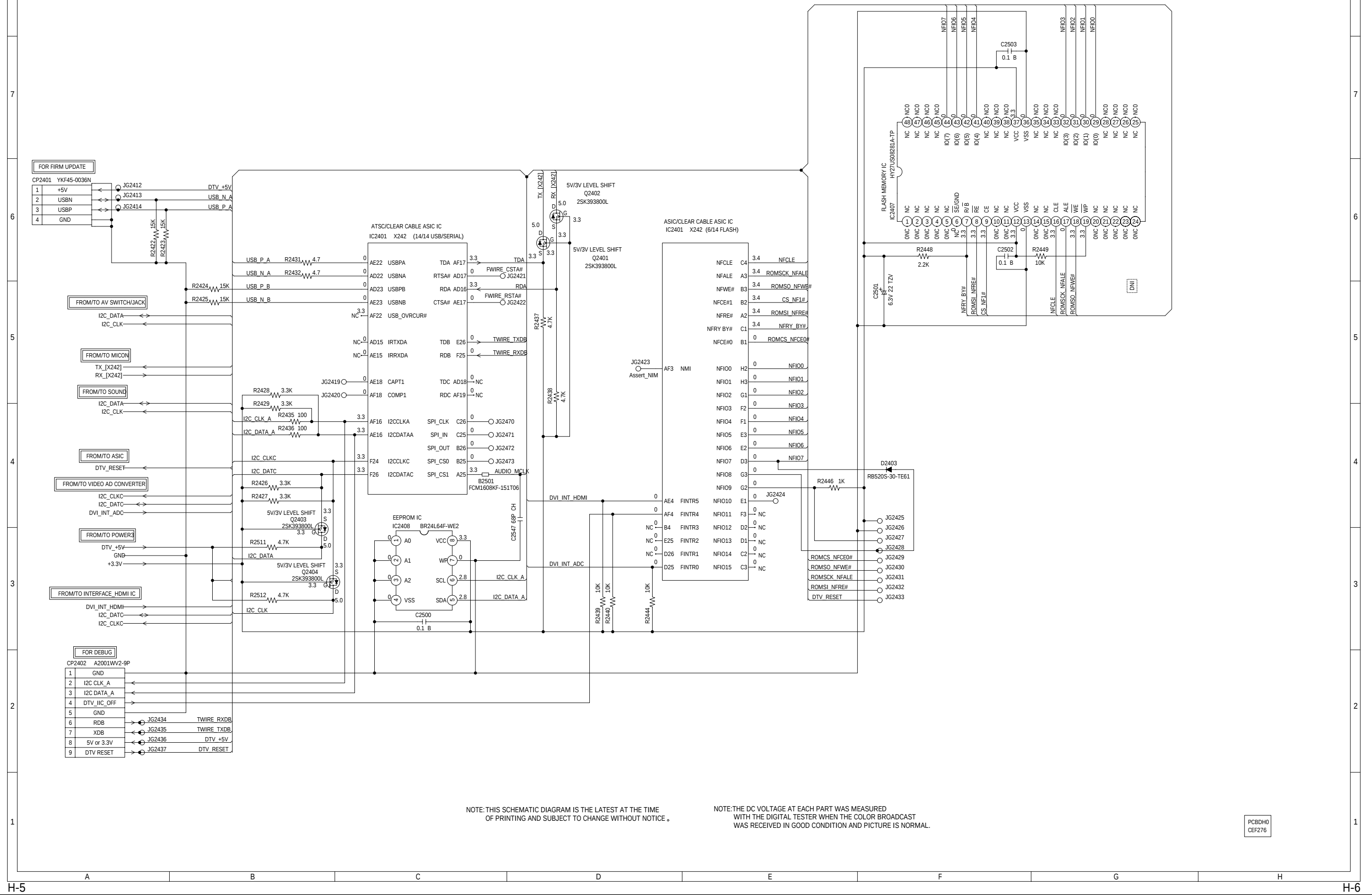
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

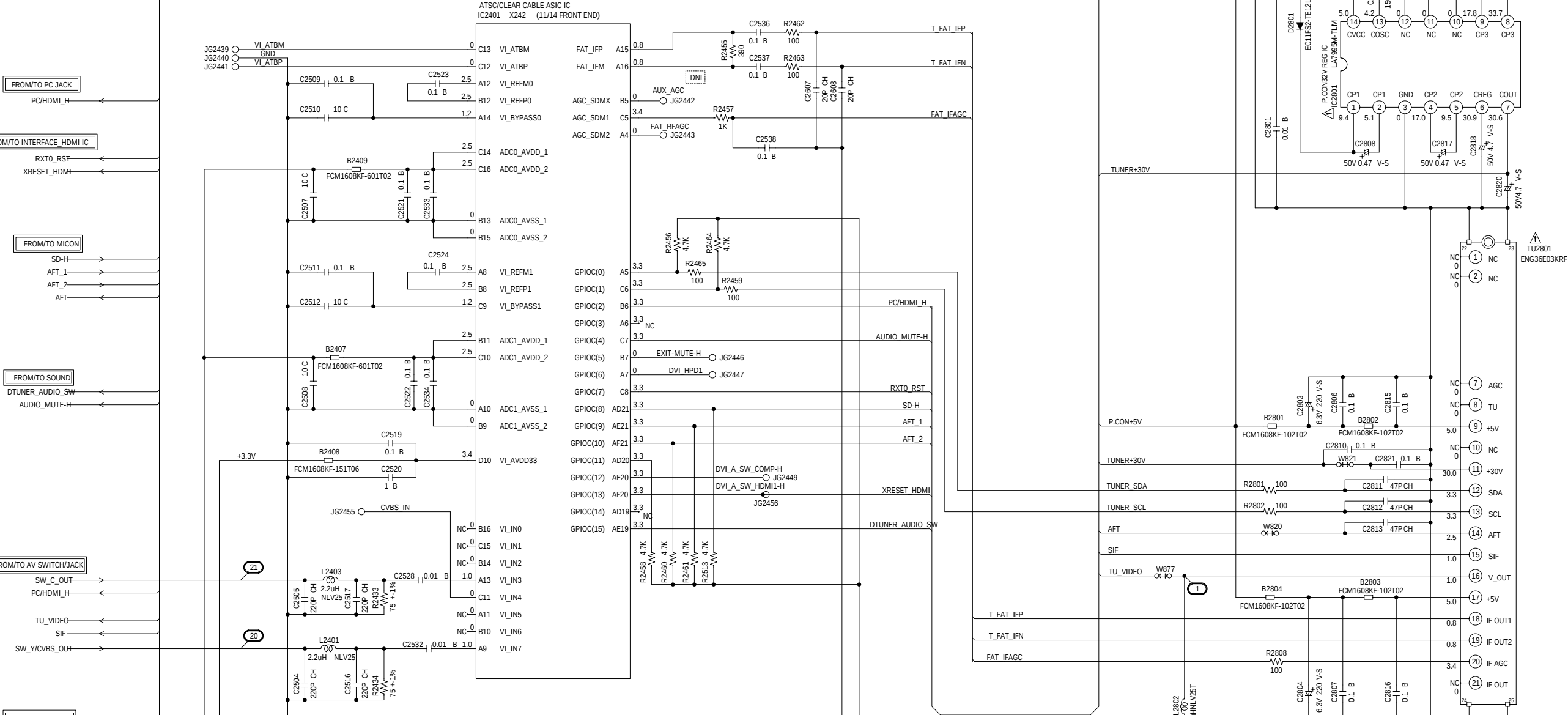
PCBDH0
CEF276

FLASH SCHEMATIC DIAGRAM

(DIGITAL PCB)



(DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

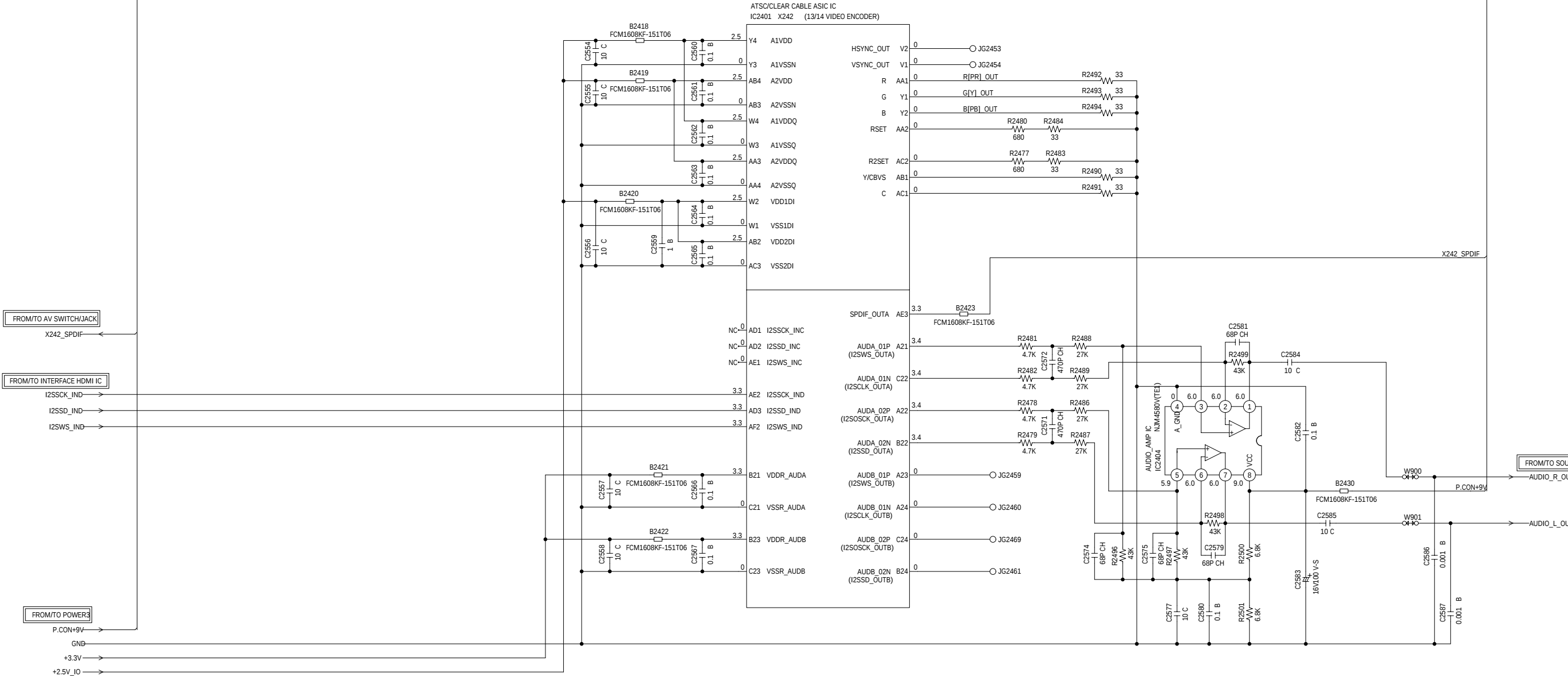
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL

CAUTION SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY .

ATTENTION: LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

PCBDH0
CEF276

AV OUT SCHEMATIC DIAGRAM



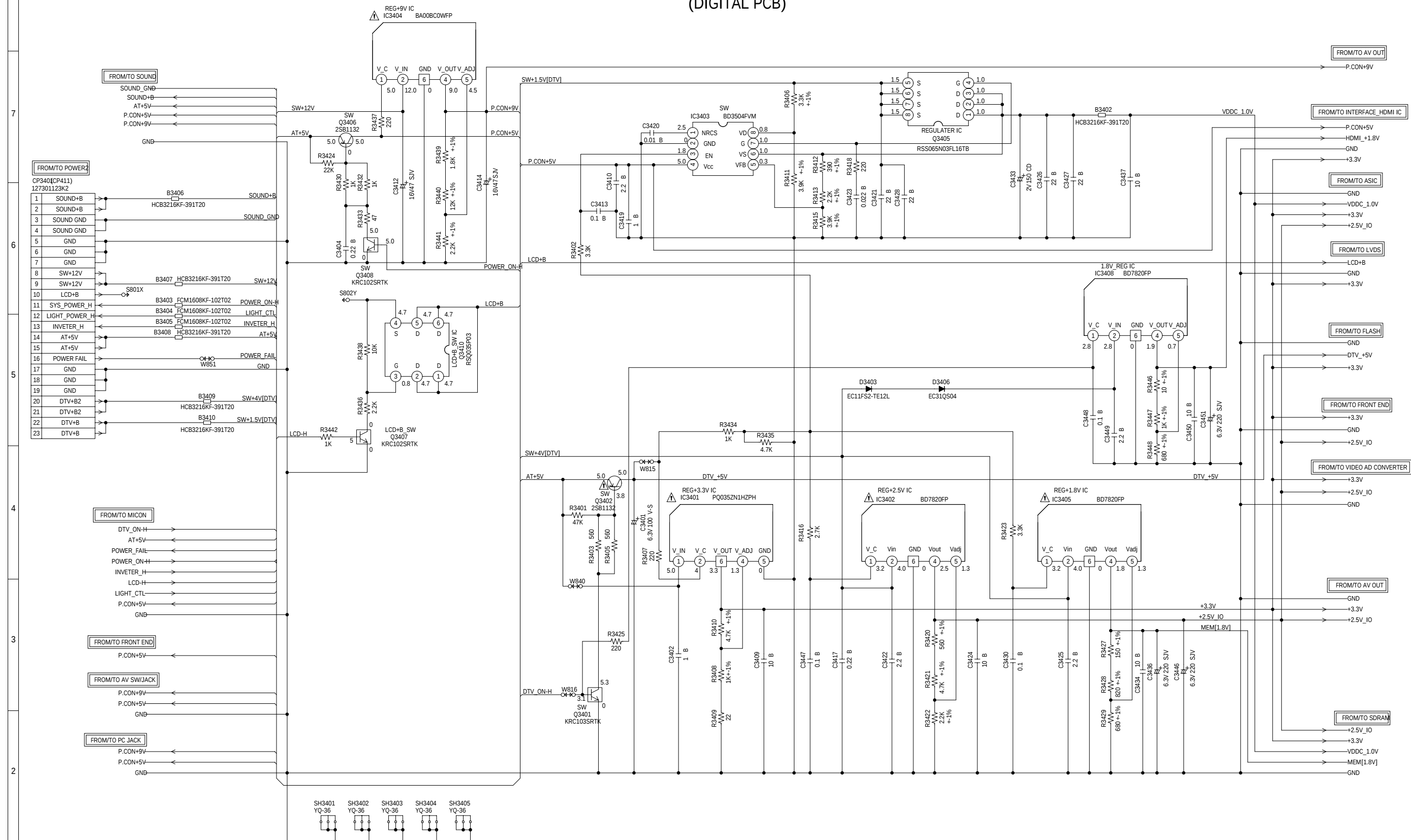
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL

PCBD
05507

POWER3 SCHEMATIC DIAGRAM

(DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

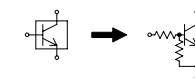
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION LES PIECES REPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES

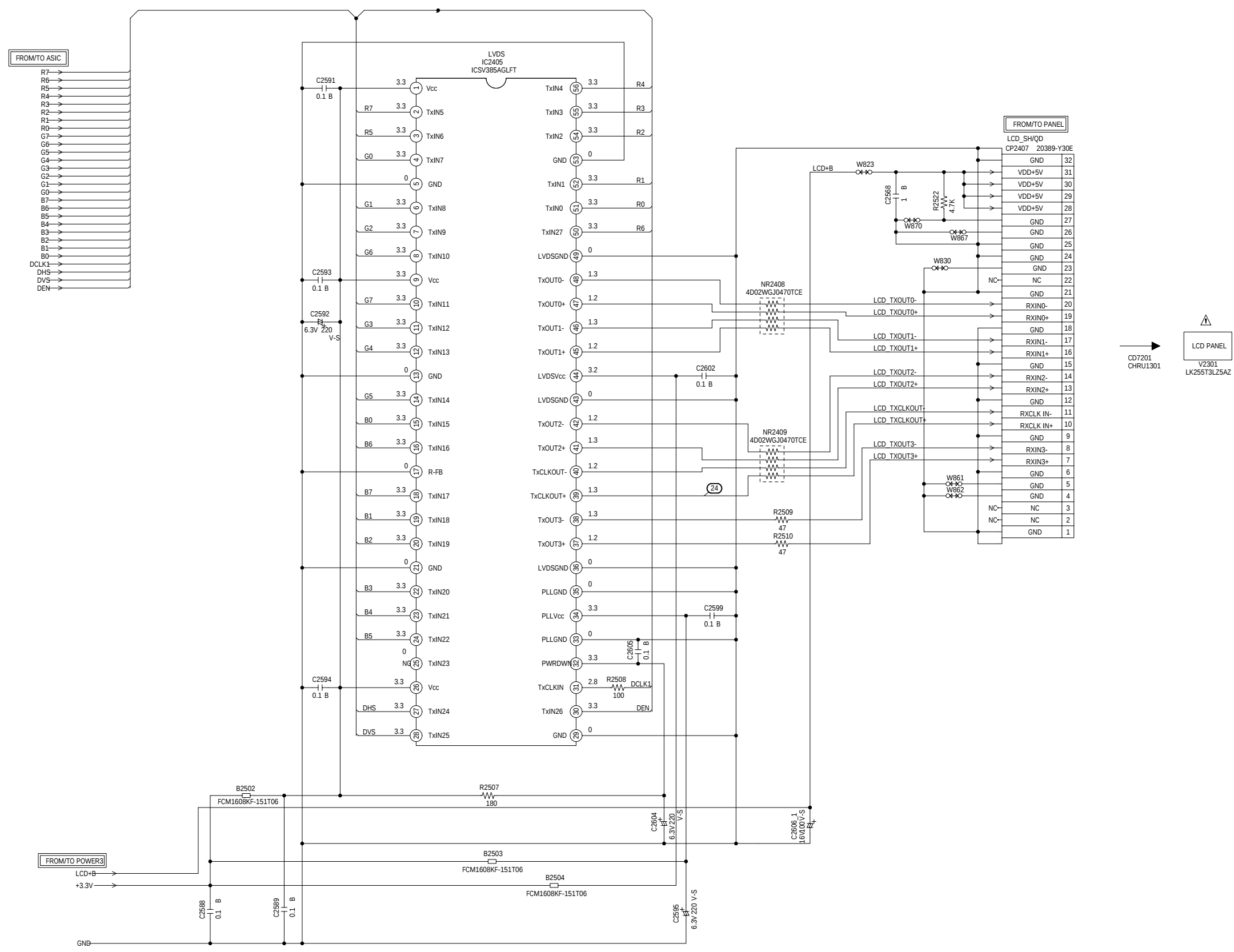
ATTENTION: LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

CAUTION: DIGITAL TRANSISTOR



PCBDH0
CEF276

LVDS Schematic Diagram
(Digital PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

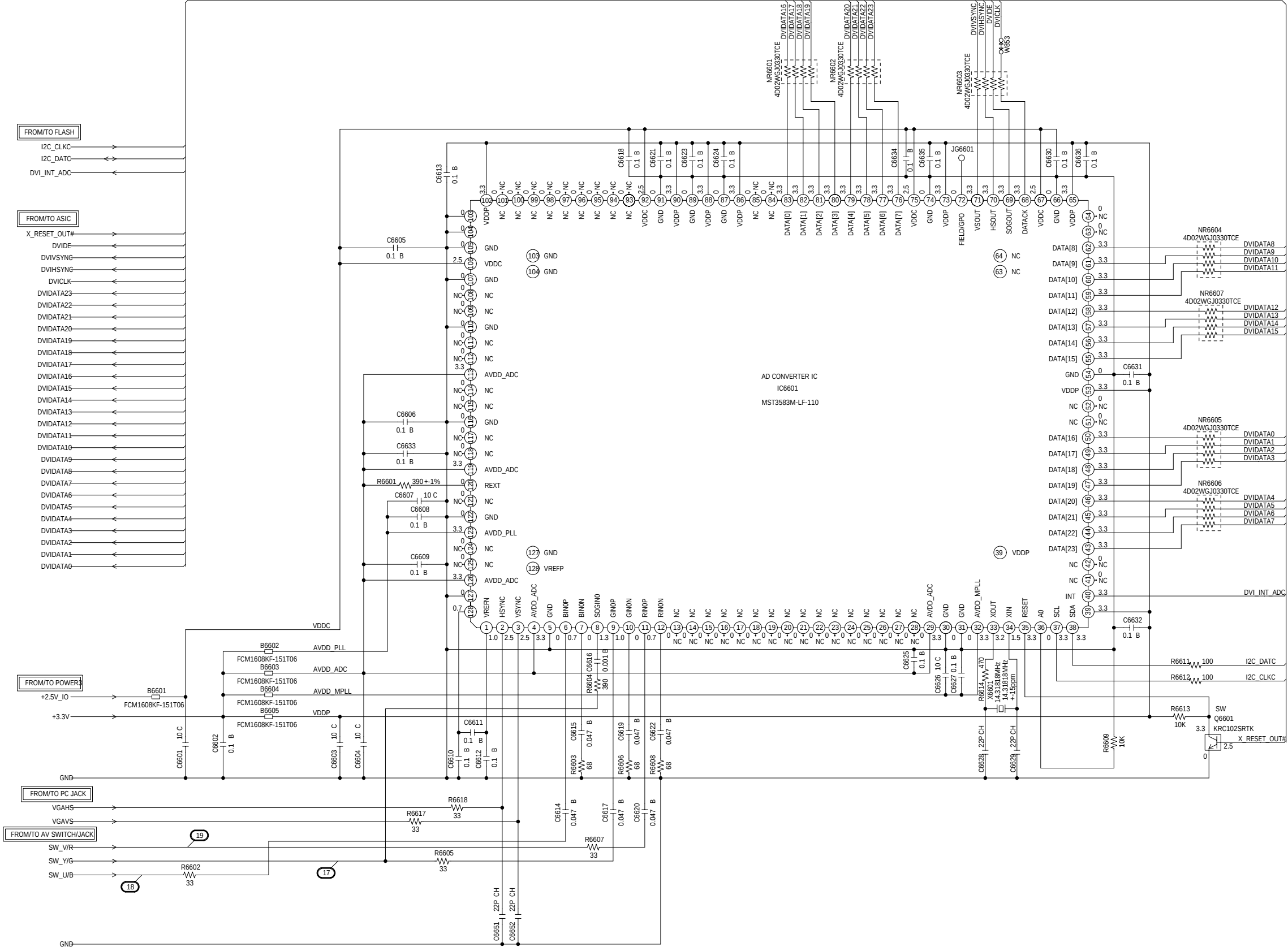
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY .

ATTENTION: LES PIECES REPARÉES PAR UN ⚠ ETANT DANGEREUSES AU POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

PCBDH0
CEF276

VIDEO AD CONVERTER SCHEMATIC DIAGRAM
(DIGITAL PCB)



NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

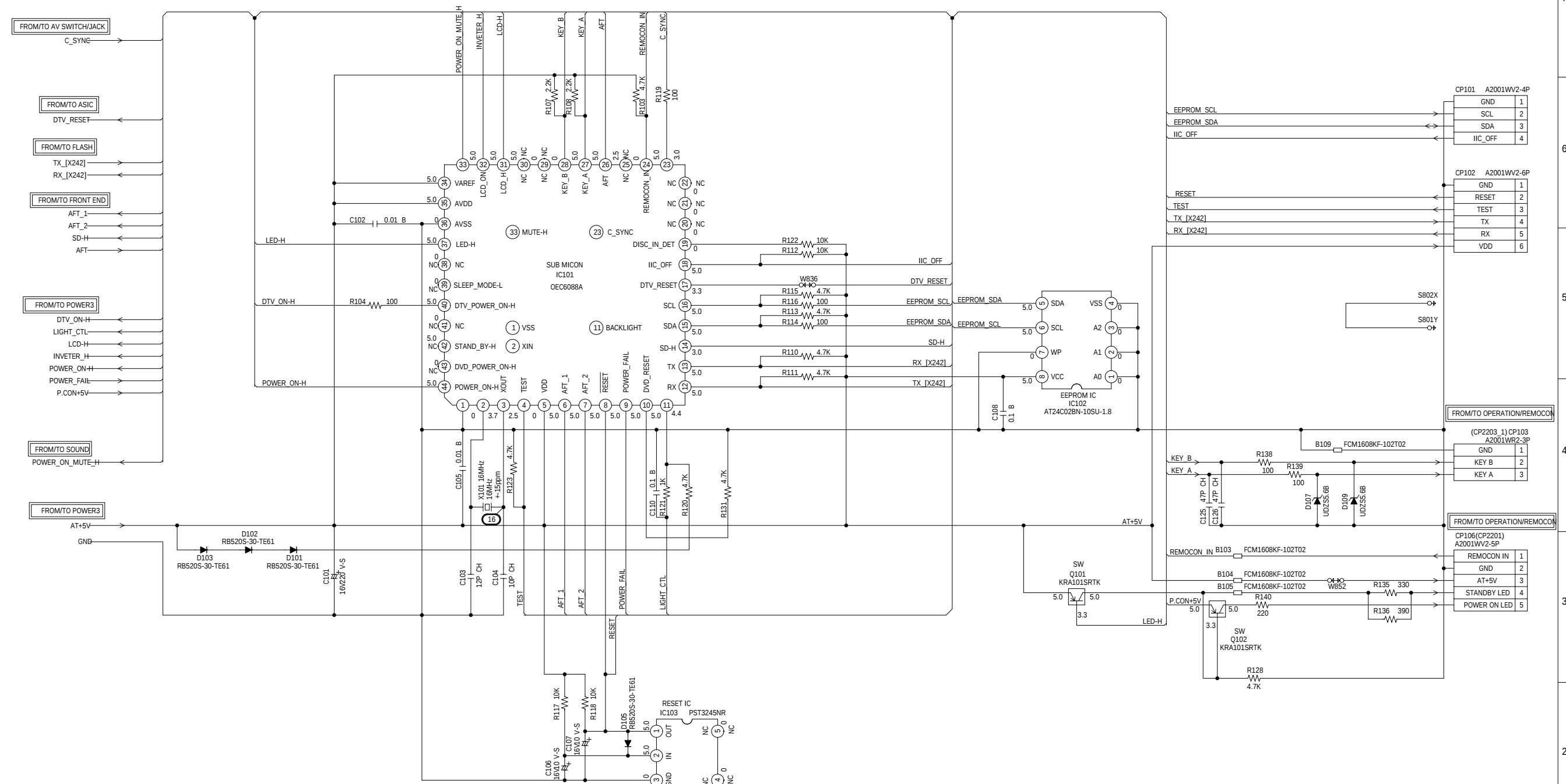
CAUTION: DIGITAL TRANSISTOR



PCBDH0
CEF276

MICON SCHEMATIC DIAGRAM

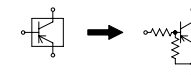
(DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

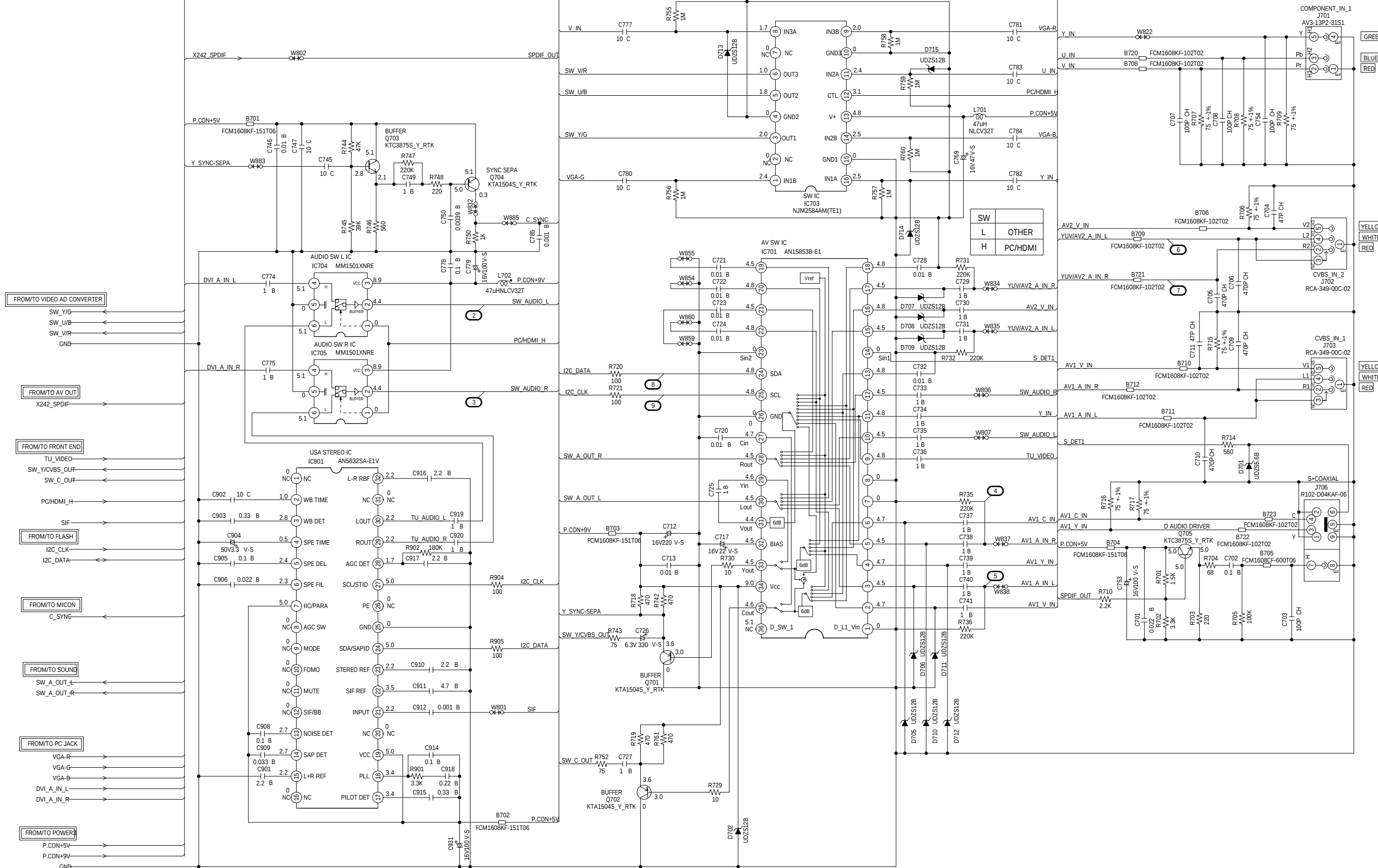
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: DIGITAL TRANSISTOR



PCBDH0
CEF276

AV SWITCH/JACK SCHEMATIC DIAGRAM (DIGITAL PCB)

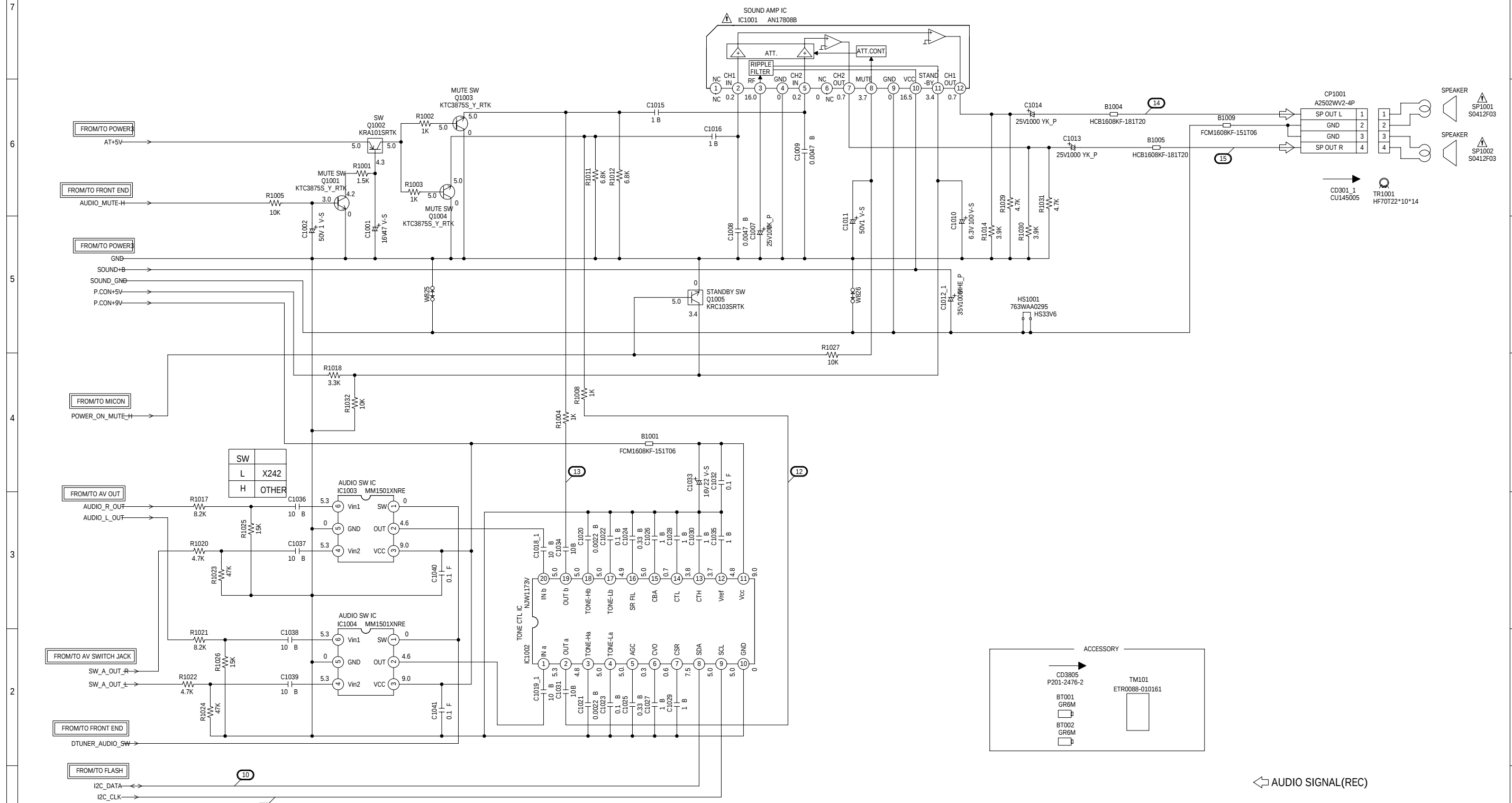


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBDH0
CEF276

SOUND SCHEMATIC DIAGRAM



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

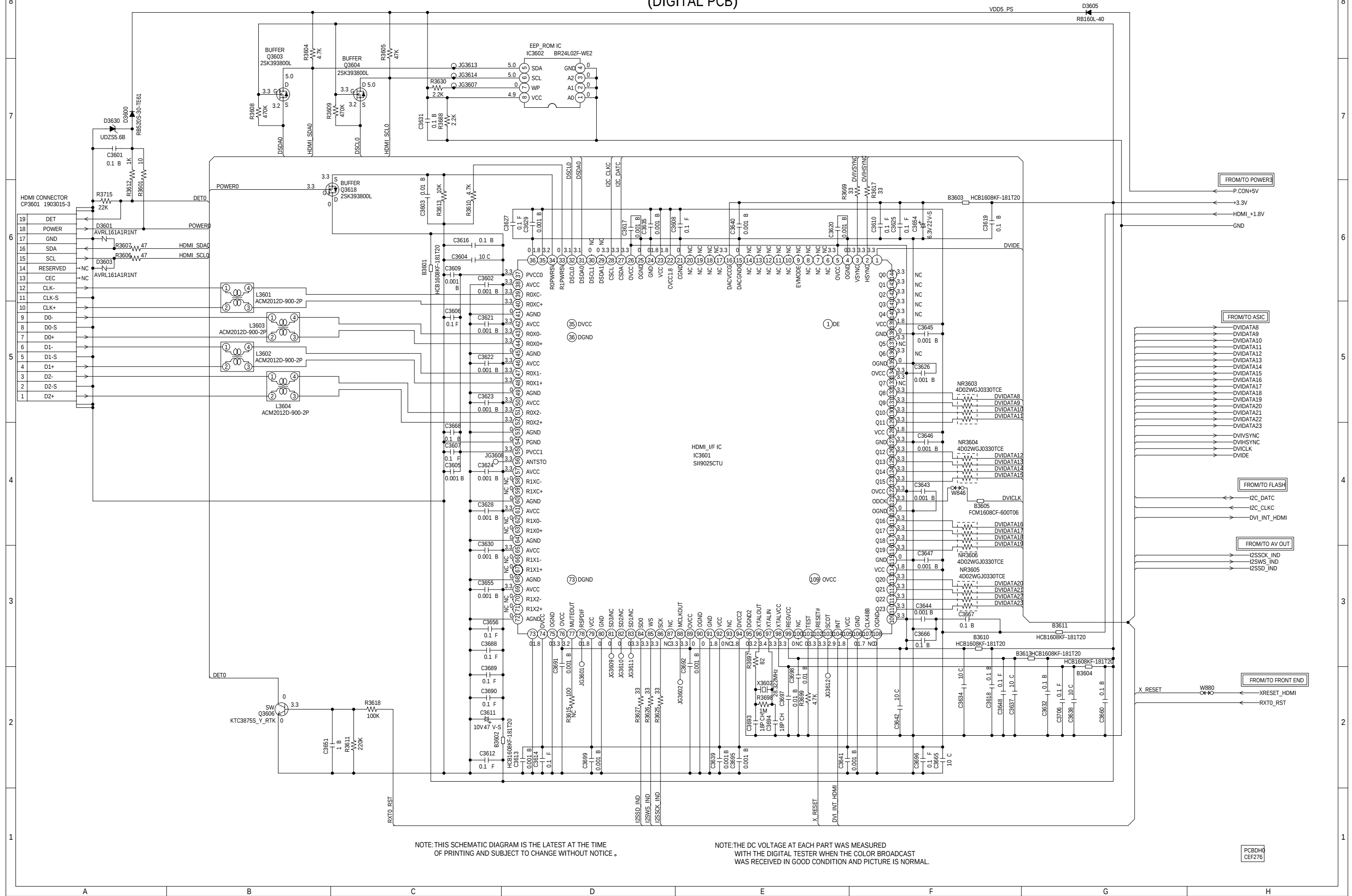
ATTENTION: LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

CAUTION: DIGITAL TRANSISTOR

CAUTION: DIGITAL TRANSISTOR

PCBDH0
CEF276

INTERFACE_HDMI IC SCHEMATIC DIAGRAM (DIGITAL PCB)

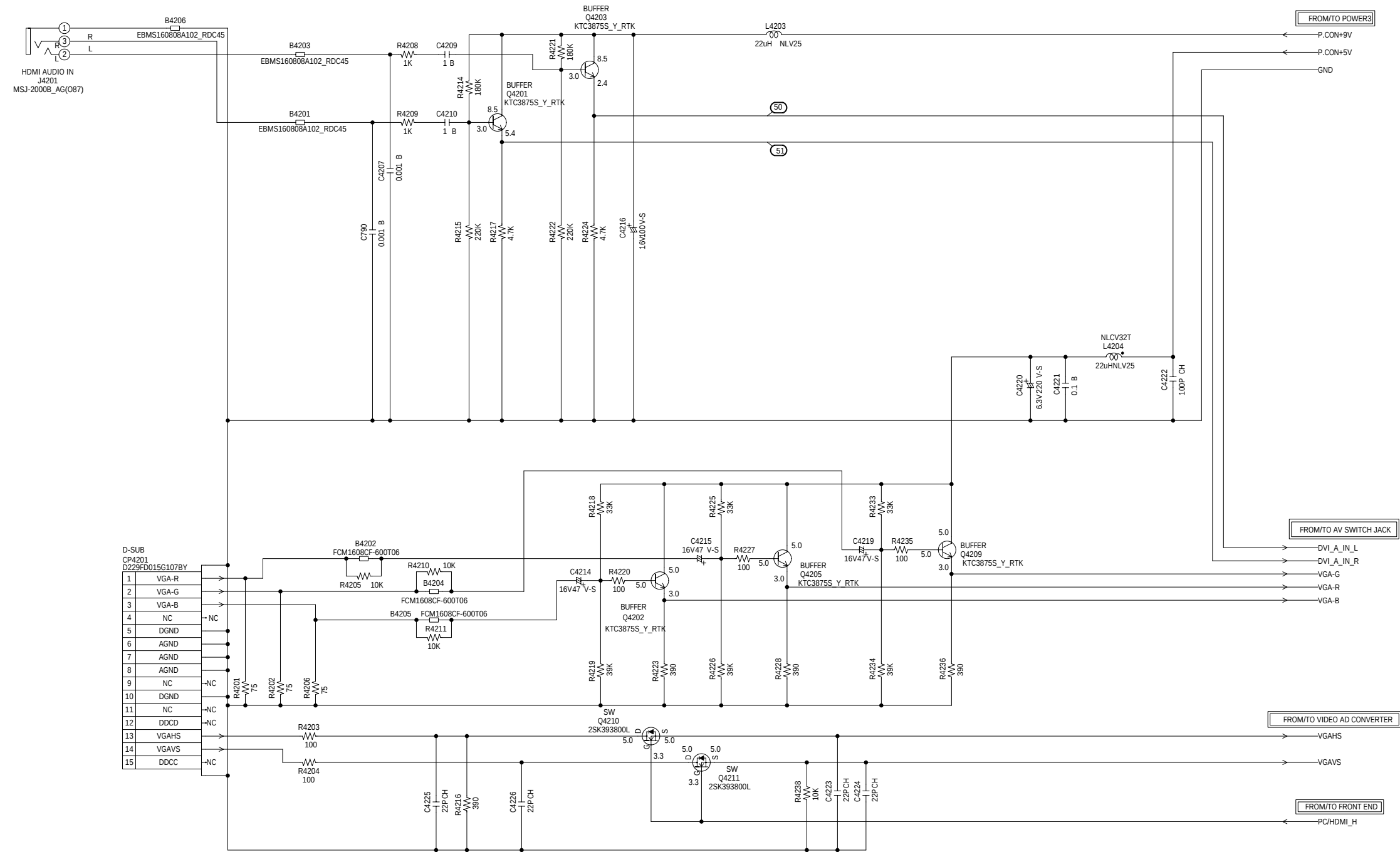


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBDH0
CEF276

PC JACK SCHEMATIC DIAGRAM
(DIGITAL PCB)

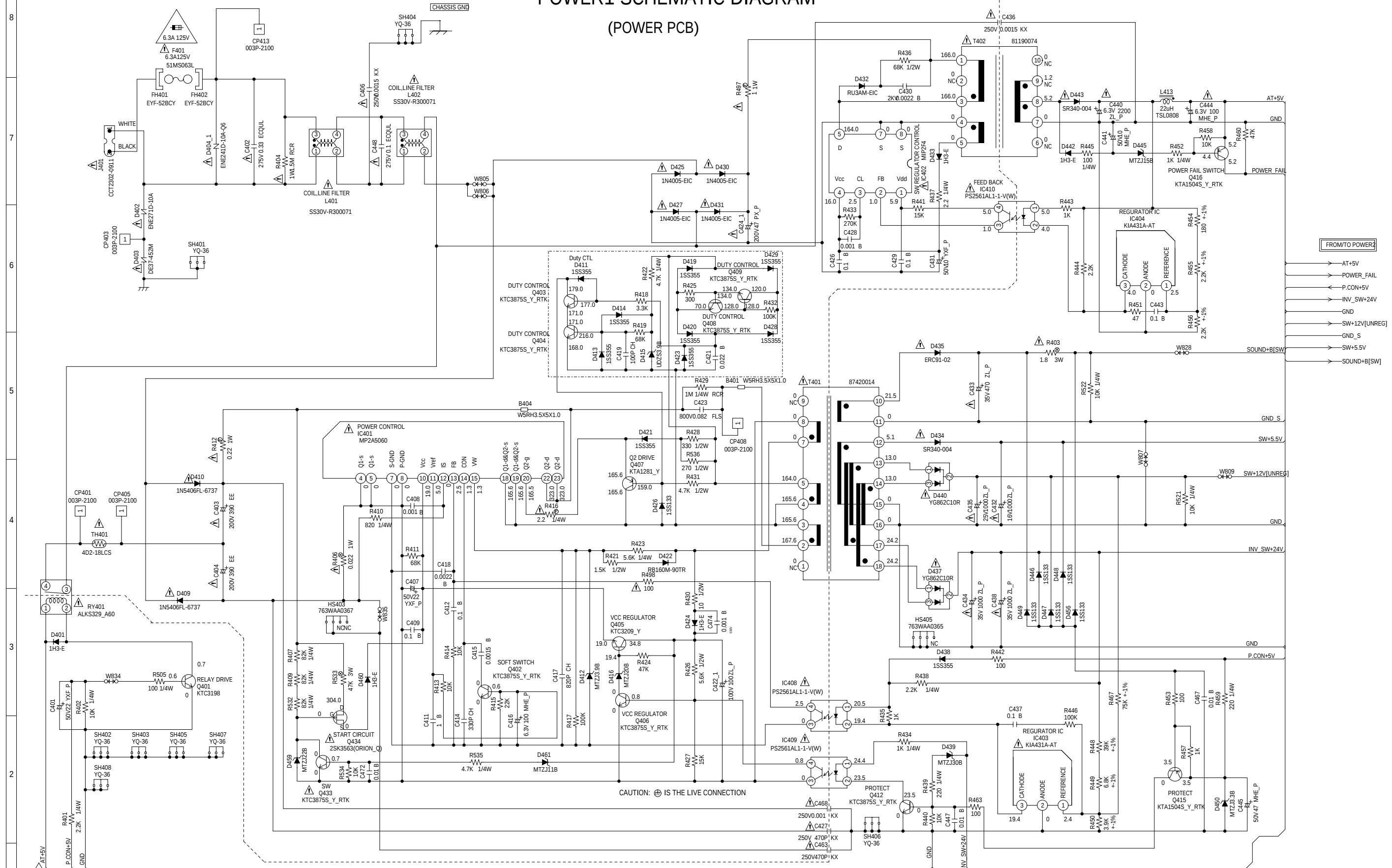


NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

PCBDH0
CEF276

POWER1 SCHEMATIC DIAGRAM



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CAUTION :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE 6.3A 125V(F401).

ATTENTION :POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE
N'UTILISER QUE DES FUSIBLE DE MEME TYPE 6.3A 125V(F401).

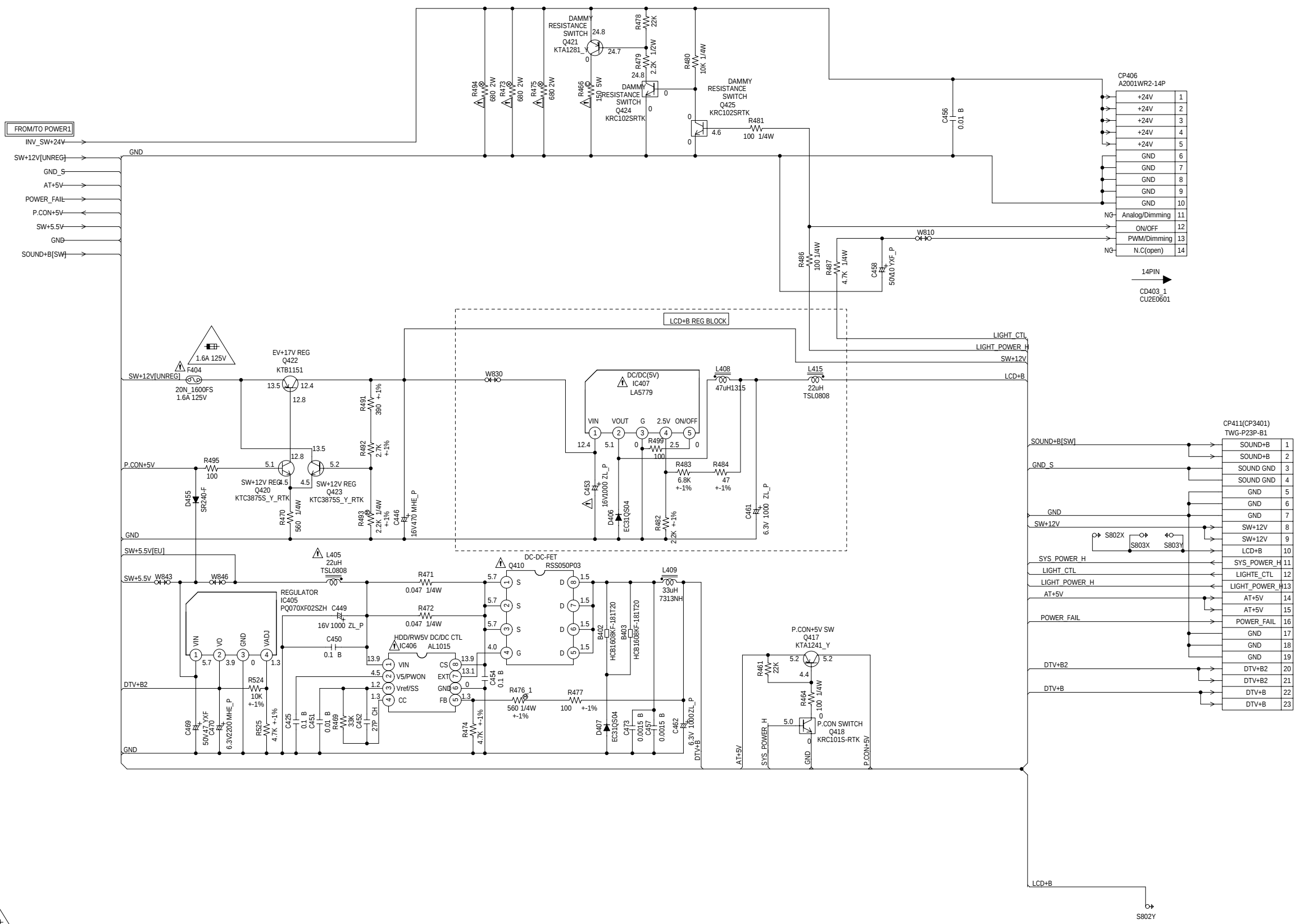
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

PCB240
CEF273

POWER2 SCHEMATIC DIAGRAM
(POWER PCB)



CAUTION :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE. 1.6V 125V(F404).

ATTENTION :POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 1.6V 125V(F404).

CAUTION :F404 IS MANUFACTURED BY SKYGATE CO.,LTD., TYPE 20N.

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTIONSINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY .

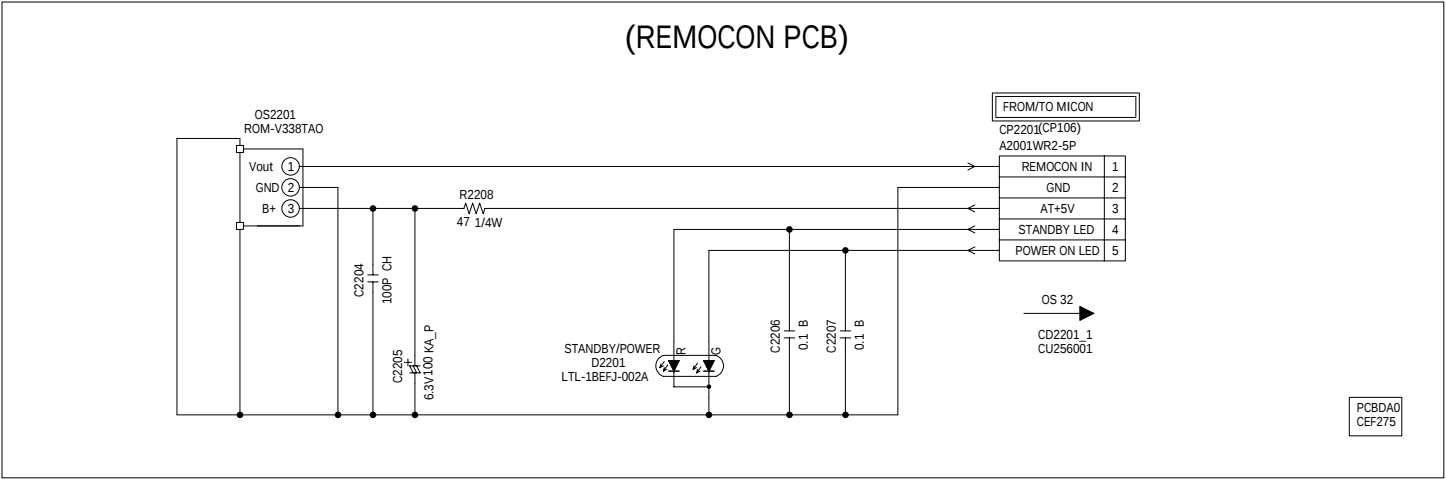
ATTENTION :LES PIECES REPARÉES PAR UN ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: DIGITAL TRANSISTOR

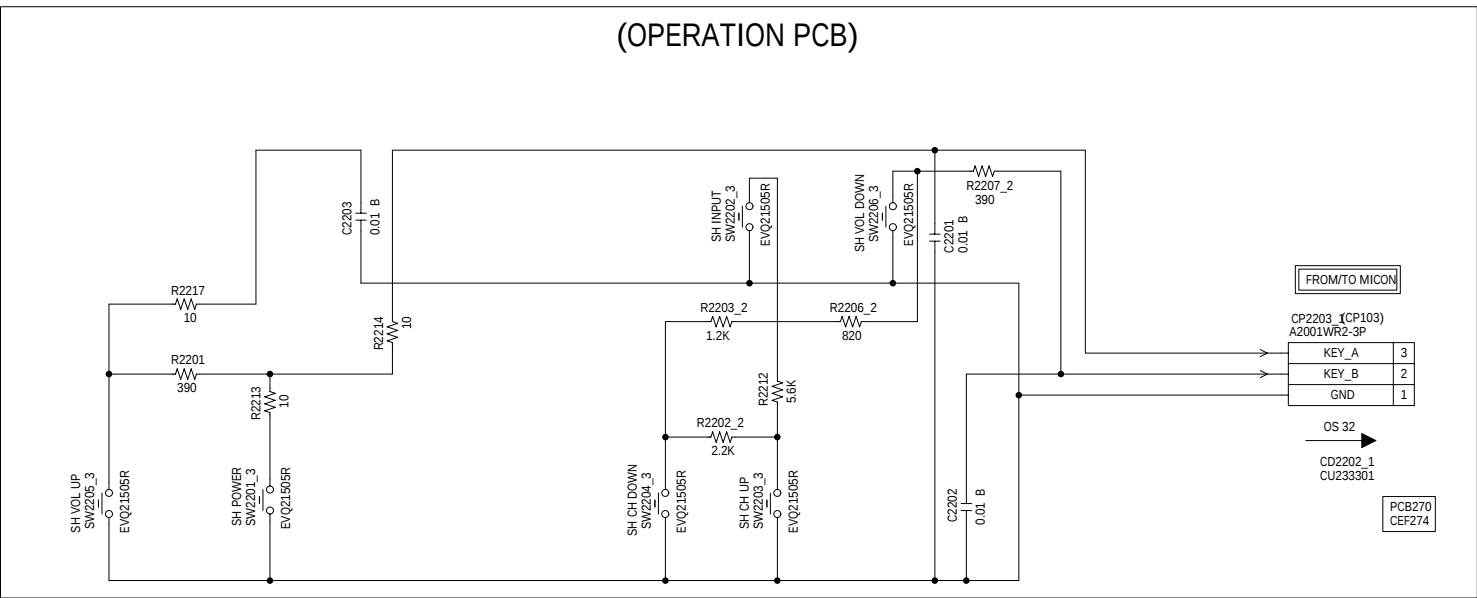
PCB240
CEF273

OPERATION/REMOCON SCHEMATIC DIAGRAM

(REMOCON PCB)



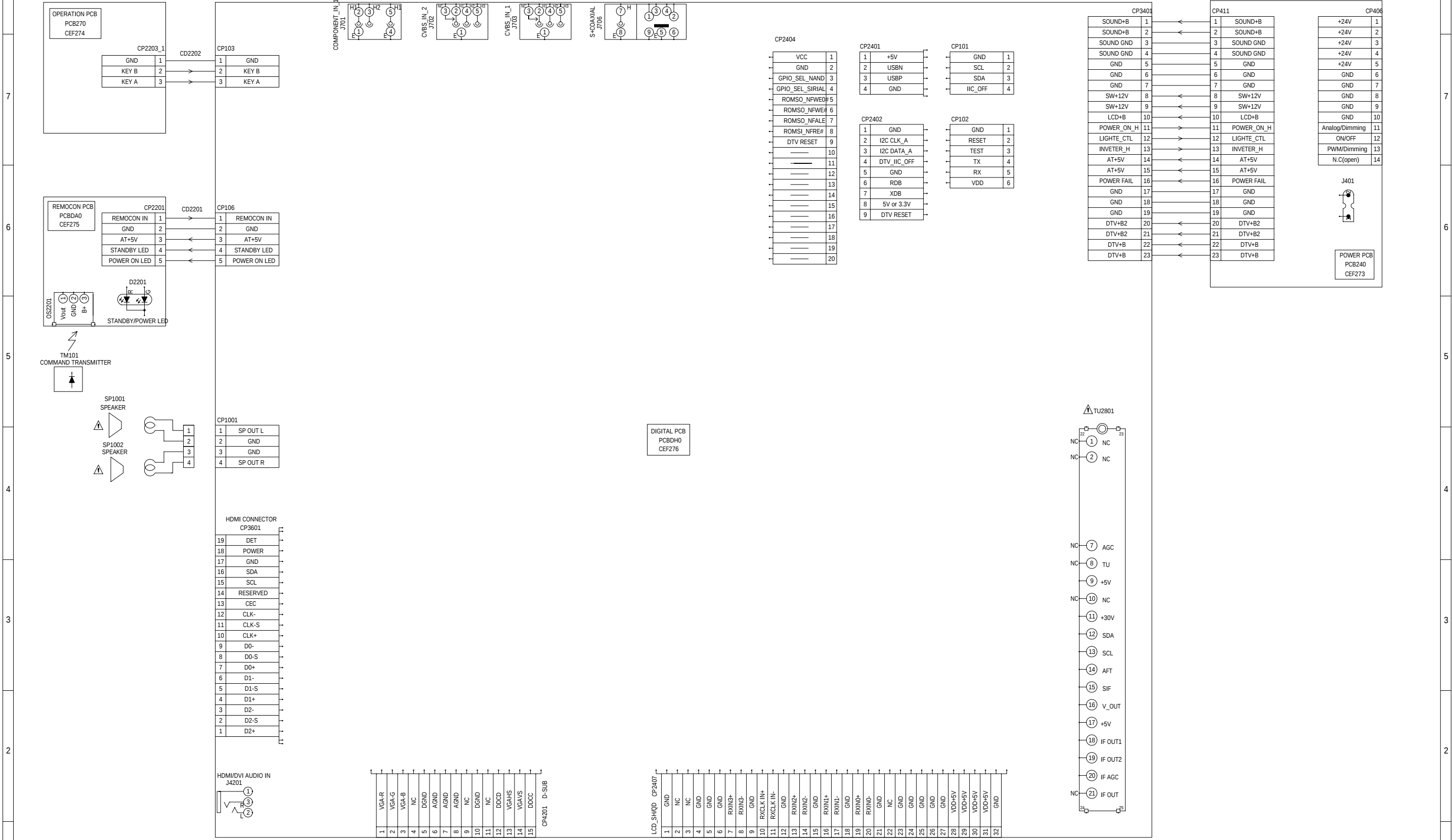
(OPERATION PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

INTERCONNECTION DIAGRAM

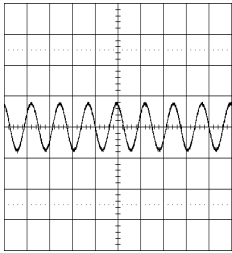


WAVEFORMS

FRONT END

2ms
0.5V

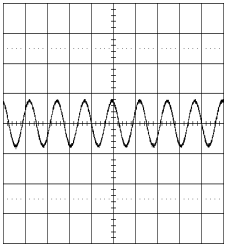
1



AV SWITCH/JACK

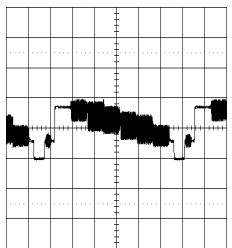
2ms
0.5V

2



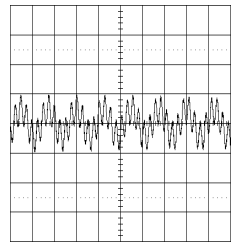
10µs
0.5V

3



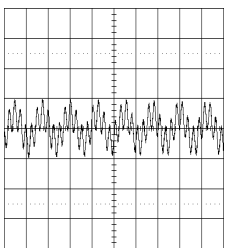
2ms
0.5V

4



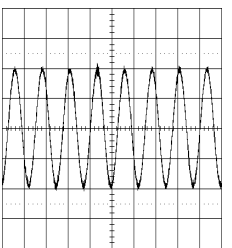
2ms
0.5V

5



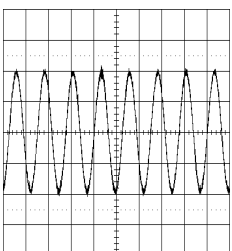
2ms
200mV

6



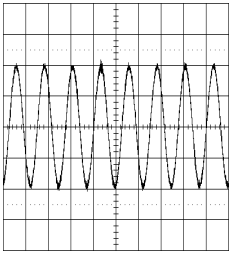
2ms
200mV

7



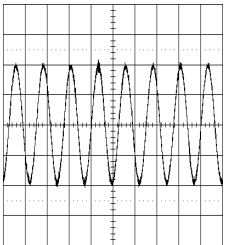
2ms
200mV

8



2ms
200mV

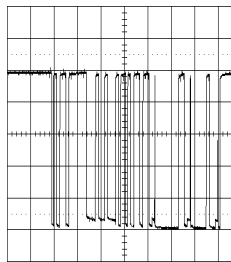
9



SOUND

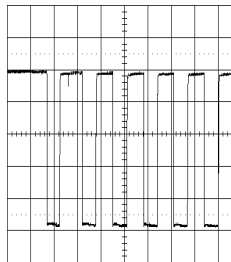
0.5ms
1.0V

10



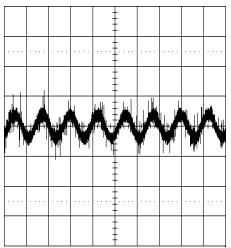
50µs
1.0V

11



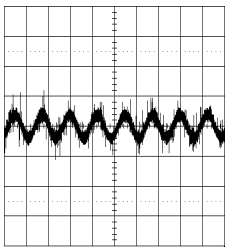
2ms
50mV

12



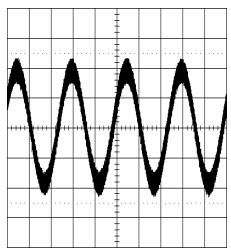
2ms
50mV

13



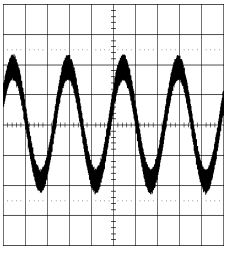
1ms
200mV

14



1ms
200mV

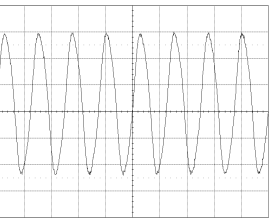
15



MICON

50ns
500mV

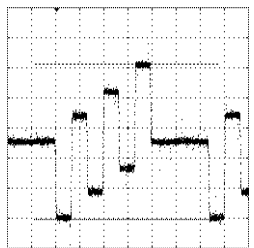
16



VIDEO AD

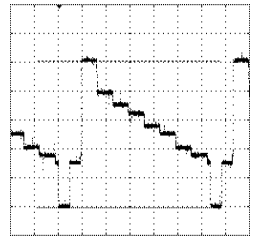
10µs
100mV

17



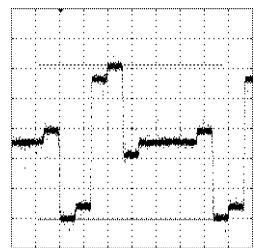
10µs
200mV

18



10µs
100mV

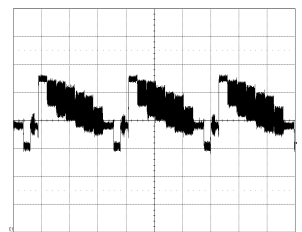
19



FRONT END

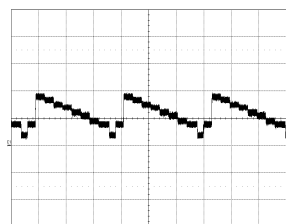
20µs
500mV

20



20µs
500mV

21



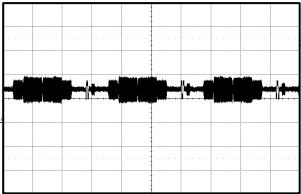
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

ASIC

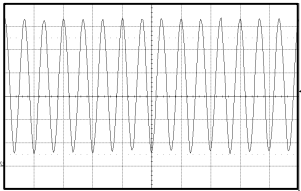
20µs
500mV

22



20µs
500mV

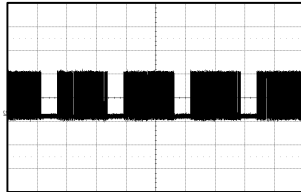
23



LVDS

10µs
2.0V

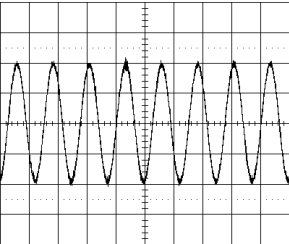
24



PC/JACK

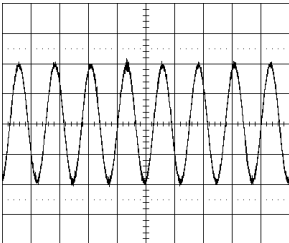
2ms
200mV

50



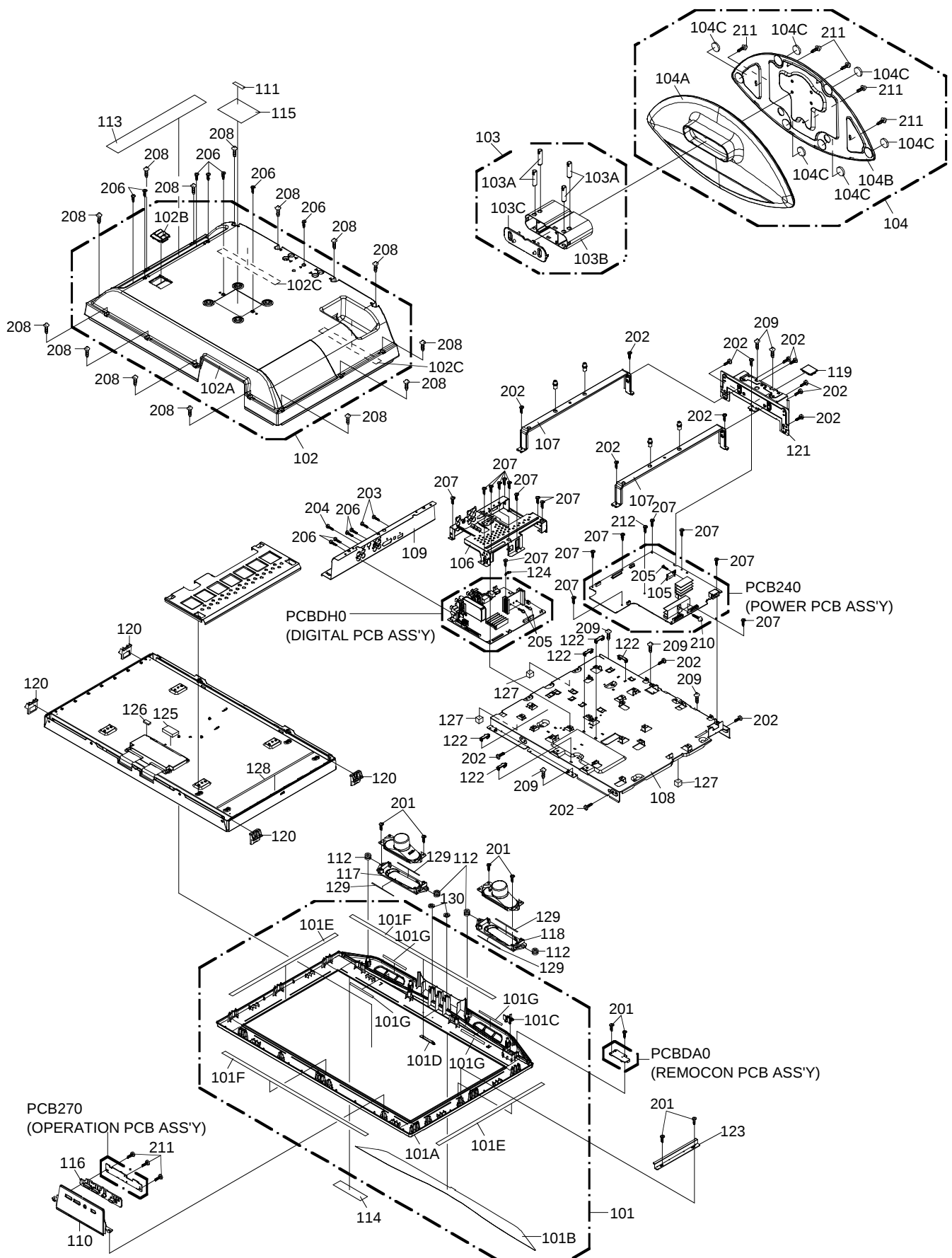
2ms
200mV

51

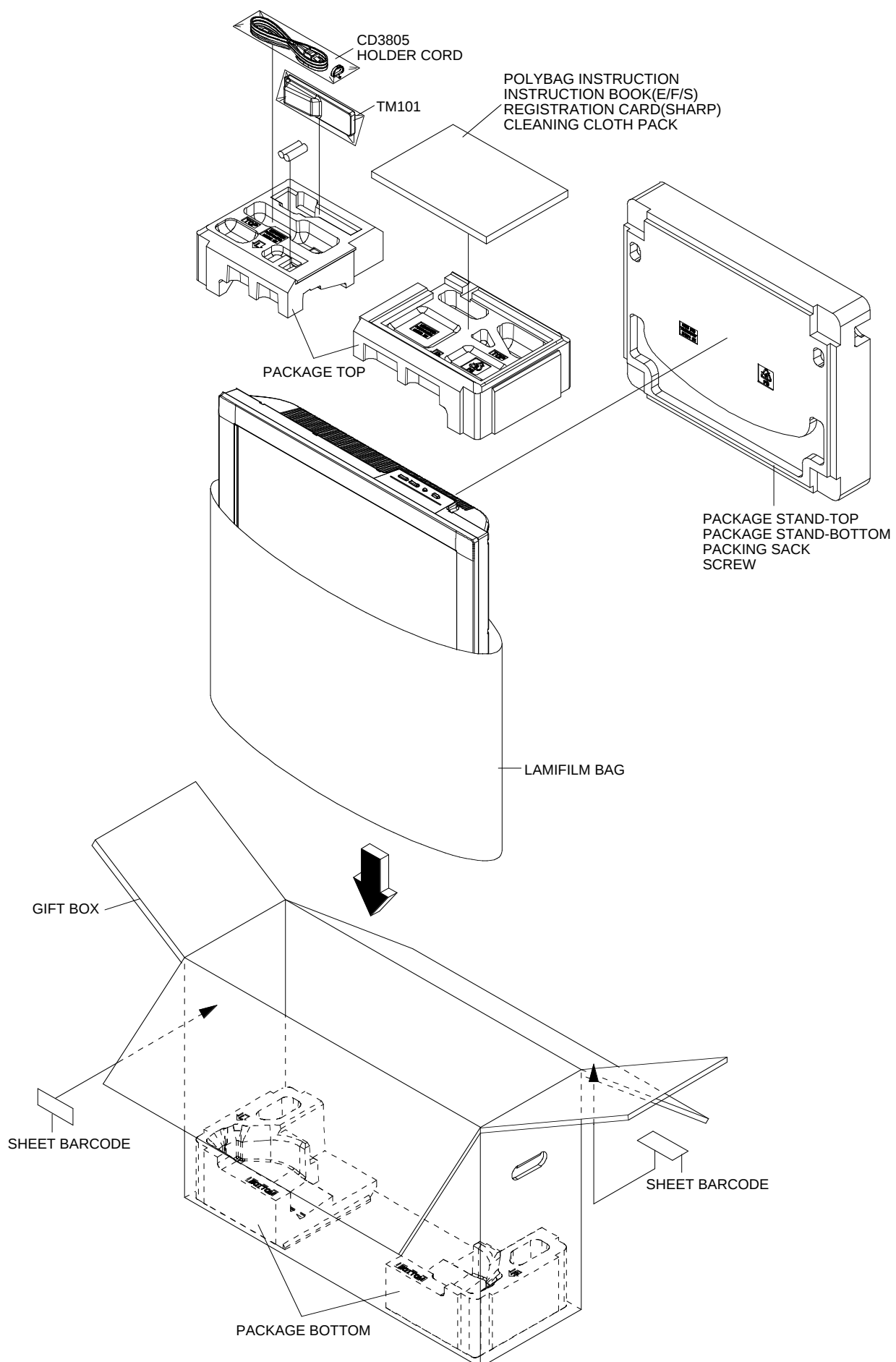


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

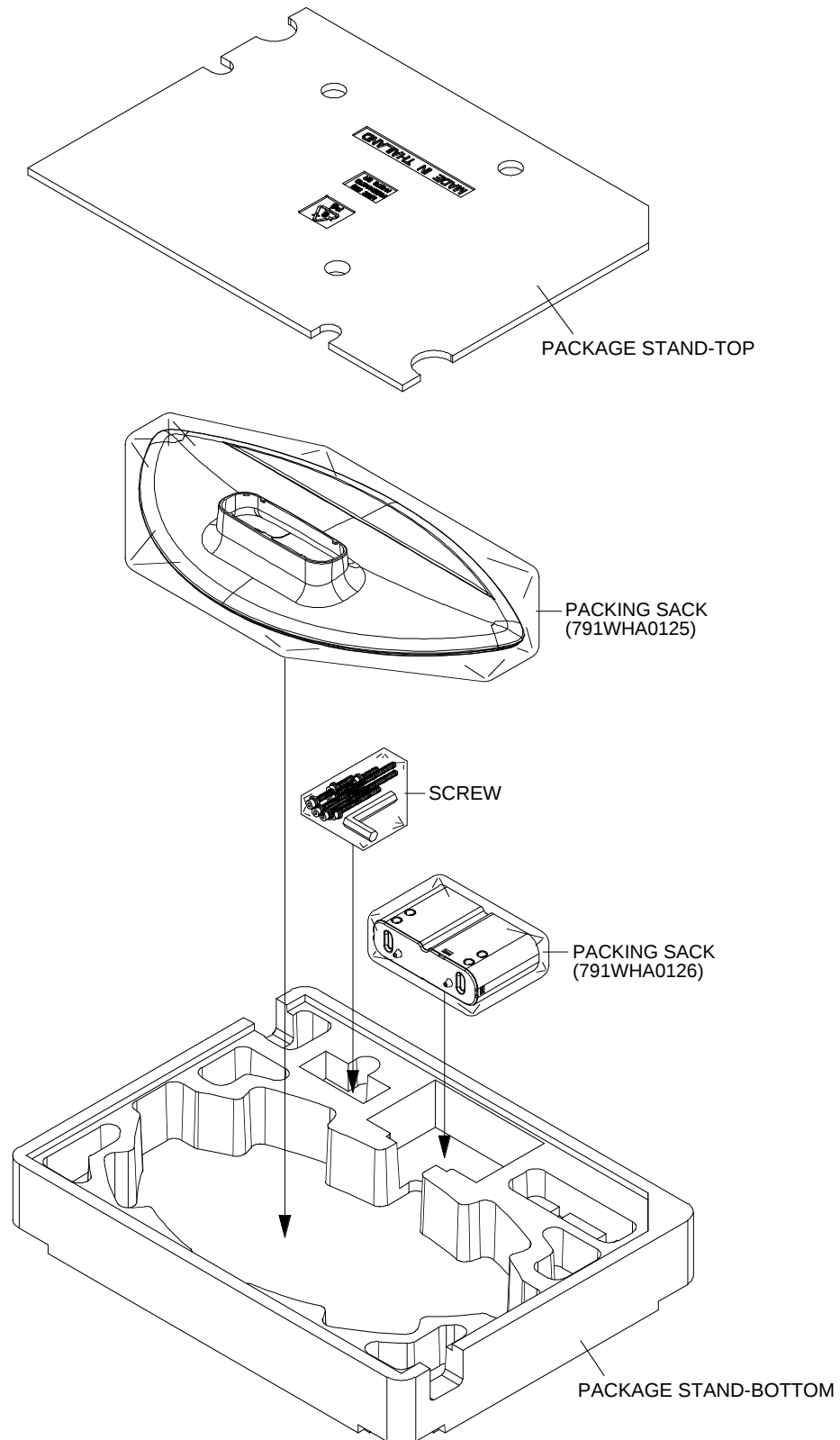
MECHANICAL EXPLODED VIEW



MECHANICAL EXPLODED VIEW (PACKING DIAGRAM)



MECHANICAL EXPLODED VIEW (PACKING DIAGRAM)



MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
101	7A7010282A	FRONT CABI ASS'Y	201	8110630A0U	SCREW TAP TITE(P) BRAZIER 3x10
101A	701WPJ1487	CABINET FRONT	202	810A14080U	SCREW WASHER(A) M4x8
101B	702WNB0003	SHEET SPEAKER	203	810213080S	SCREW PAN M3x8
101C	713WPA0415	GLASS LED	204	810223040S	SCREW BIND M3x4
101D	7235270040	BADGE BRAND	205	810763080U	SCREW TAP TITE(S) BRAZIER 3x8
101E	800WQ00124	FELT SHEET	206	810923080S	SCREW TAP TITE(B) BIND 3x8
101F	800WQ00125	FELT SHEET	207	810923080U	SCREW TAP TITE(B) BIND 3x8
101G	800WQ00127	FELT SHEET	208	811023085S	SCREW TAP TITE(P) BIND 3x25
			209	8117540A0U	SCREW TAPPING(B0) TRUSS 4x10
102	7A7020122A	BACK CABI ASS'Y			
102A	702WPA1291	CABINET BACK	210	8109130A0U	SCREW TAP TITE(B) WH7 3x10
102B	706WPA0027	COVER CONNECTOR	211	811063080U	SCREW TAP TITE(P) BRAZIER 3x8
102C	800WQ0A113	FELT SHEET	212	8171130A0U	SCREW TAP TITE(B) WASHER12 3x10
103	7A7640006A	FRAME STAND ASS'Y	---	7230008287	SHEET BARCODE
103A	704WPA0081	HOLDER STAND	---	774WPA0011	HOLDER CORD
103B	761WEA0035	FRAME STAND	---	791WHA0125	PACKING SACK
103C	761WPA0470	COVER FRAME STAND	---	791WHA0126	PACKING SACK
			---	791WHA0130	LAMIFILM BAG
104	7A7040029A	STAND ASS'Y	---	792WHA0716	PACKAGE STAND TOP
104A	704WPB0039	STAND	---	792WHA0717	PACKAGE STAND BOTTOM
104B	761WSB0054	ANGLE STAND	---	792WHA0718	PACKAGE TOP
104C	800WFA0120	CUSHION LEG	---	792WHA0719	PACKAGE BOTTOM
			---	793WCD1810	GIFT BOX
105	761WSA0459	SHIELD IC	---	89001122A2	SCREW
106	752WSA0640	SHIELD DIGITAL	---	890CCOR001	CLEANING CLOTH PACK
107	761WSA0480	ANGLE MAIN	---	A31B01G975	INSTRUCTION BOOK KIT
108	761WSA0485	COVER LCD	---	J31B0131A	INSTRUCTION BOOK(E/F/S)
109	761WSB0055	PLATE JACK	---	J3Y00417A	REGISTRATION CARD(SHARP)
			---	JB5ND200	POLYBAG INSTRUCTION(RED CAUTION)
110	711WPD0729	PLATE BUTTON			
111	7220001236	SHEET SERIAL			
112	800WR00084	DAMPER SPEAKER			
113	7230008289	SHEET JACK			
114	7230008313	POP LABEL			
115	7235270044	SHEET RATING			
116	735WPB0360	BUTTON FRAME			
117	761WPA0473	HOLDER SPEAKER-L			
118	761WPA0474	HOLDER SPEAKER-R			
119	761WPA0477	COVER HINGE			
120	761WPA0478	HOLDER PANEL			
121	761WSA0466	ANGLE HINGE			
122	899RFC21V0	HOLDER CORD			
123	761WSA0537	ANGLE PANEL			
124	743WKA0058	SPRING EARTH			
125	800WFA0056	CUSHION 25x50xT4			
126	8965TS101B	CUSHION W10/H6/L15			
127	8965TS1210	CUSHION W10/H12/L10			
128	7240001126	SHEET PC			
129	800WQ00127	FELT SHEET			
130	800WB0A017	FIBER WASHER			

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
REMOCON PCB ASS'Y			
*** PCB ***			
PCBDA0	A31B01EDA0	REMOCON PCB ASS'Y	CEF275A
*** DIODES ***			
D2201	0021E9Q010	LED	LTL-1BEFJ-002A
*** CONNECTORS ***			
CP2201	069S250639	CONNECTOR PCB SIDE	A2001WR2-5P
*** OTHERS ***			
OS2201	077A033001	REMOTE RECEIVER	ROM-V338TAO
DIGITAL PCB ASS'Y			
*** PCB ***			
PCBDH0	A31B01EDH0	DIGITAL PCB ASS'Y	CEF276A
*** CAPACITORS ***			
C1007	E7EPU3101M	CE	100 UF 25V
C1012	E7ESF4102M	CE	1000 UF 35V
C1013	E7EPF3102M	CE	1000 UF 25V
C1014	E7EPF3102M	CE	1000 UF 25V
*** DIODES ***			
D101	DD7R20S300	DIODE SCHOTTKY	RB520S-30-TE61
D102	DD7R20S300	DIODE SCHOTTKY	RB520S-30-TE61
D103	DD7R20S300	DIODE SCHOTTKY	RB520S-30-TE61
D105	DD7R20S300	DIODE SCHOTTKY	RB520S-30-TE61
D107	DE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D109	DE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D701	DE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
D702	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D705	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D706	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D707	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D708	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D709	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D710	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D711	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D712	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D713	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D714	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D715	DE7RB1202B	DIODE ZENER	UDZS12B TE-177
D2403	DD7R20S300	DIODE SCHOTTKY	RB520S-30-TE61
D2801	D28R11FS20	DIODE	EC11FS2-TE12L
D3403	D28R11FS20	DIODE	EC11FS2-TE12L
D3406	D28R1QS040	DIODE	EC31QS04-TE12L
	D4CRSK34A0	DIODE SCHOTTKY	SK34A
D3600	DD7R20S300	DIODE SCHOTTKY	RB520S-30-TE61
D3601	D77R1A1R10	DIODE VARISTA	AVRL161A1R1NT
D3603	D77R1A1R10	DIODE VARISTA	AVRL161A1R1NT
D3605	DD7R60L400	DIODE SCHOTTKY	RB160L-40-TE25
D3630	DE7RB5R62B	DIODE ZENER	UDZS5.6B TE-17
*** ICS ***			
IC101	S31B01EM01	MEMORY DATA	OEC6088A
IC102	S31B01EE01	MEMORY DATA	AT24C02BN-10SU-1.8
IC103	I9UF032450	IC	PST3245NR

or

ELECTRICAL REPLACEMENT PARTS LIST

IC701	I01F05853B	IC	AN15853B-E1
IC703	I0QF025840	IC	NJM2584AM(TE1)
IC704	I0UF015010	IC	MM1501XNRE
IC705	I0UF015010	IC	MM1501XNRE
IC901	I01FF58320	IC	AN5832SA-E1V
IC1001	I0FSP7808B	IC	AN17808B
IC1002	I5AFF11730	IC	NJW1173V(TE1)
IC1003	I0UF015010	IC	MM1501XNRE
IC1004	I0UF015010	IC	MM1501XNRE
IC2401	IFNMEX2420	IC	X242
IC2402	IGGM005120	IC	HYB18T512161BF-25
IC2404	I0QF0580V0	IC	NJM4580V(TE1)
IC2405	IF8F0385A0	IC	ICSV385AGLFT
IC2407	S31B01EF01	MEMORY DATA	HY27US08281A-TPCB
IC2408	S31B01EE02	MEMORY DATA	BR24L64F-WE2
IC2801	I03D979950	IC	LA7995M-TLM
IC3401	I0GF95ZN10	IC	PQ035ZN1HZPH
IC3402	I07F078200	IC	BD7820FP-E2
IC3403	I57F035040	IC	BD3504FVM
IC3404	I07F0C0WF0	IC	BA00BC0WFP-E2
IC3405	I07F078200	IC	BD7820FP-E2
IC3408	I07F078200	IC	BD7820FP-E2
IC3601	IG1F090250	IC	SII9025CTU
IC3602	S31B01EE03	MEMORY DATA	BR24L02F-WE2
IC6601	IFSK035830	IC	MST3583M-LF-110

*** TRANSISTORS ***

Q101	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q102	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q701	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q702	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q703	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q704	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q705	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q1001	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q1002	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q1003	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q1004	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q1005	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q2401	T43A938000	FET	2SK393800L
Q2402	T43A938000	FET	2SK393800L
Q2403	T43A938000	FET	2SK393800L
Q2404	T43A938000	FET	2SK393800L
Q3401	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q3402	T77J011320	TRANSISTOR SILICON	2SB1132T100(Q,R)
Q3405	TJ7M65N030	FET	RSS065N03FL16TB
Q3406	T77J011320	TRANSISTOR SILICON	2SB1132T100(Q,R)
Q3407	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q3408	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q3410	TJ7T35P030	FET	RSQ035P03
Q3603	T43A938000	FET	2SK393800L
Q3604	T43A938000	FET	2SK393800L
Q3606	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q3618	T43A938000	FET	2SK393800L
Q4201	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4202	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4203	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4205	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4209	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q4210	T43A938000	FET	2SK393800L
Q4211	T43A938000	FET	2SK393800L
Q6601	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK

*** COILS ***

B103	024HC51023	CORE,BEADS	FCM1608KF-102T02
B104	024HC51023	CORE,BEADS	FCM1608KF-102T02
B105	024HC51023	CORE,BEADS	FCM1608KF-102T02
B109	024HC51023	CORE,BEADS	FCM1608KF-102T02
B701	024HC51513	CORE,BEADS	FCM1608KF-151T06

ELECTRICAL REPLACEMENT PARTS LIST

B702	024HC51513	CORE,BEADS	FCM1608KF-151T06
B703	024HC51513	CORE,BEADS	FCM1608KF-151T06
B704	024HC51513	CORE,BEADS	FCM1608KF-151T06
B705	024HC56005	CORE,BEADS	FCM1608CF-600T06
B706	024HC51023	CORE,BEADS	FCM1608KF-102T02
B708	024HC51023	CORE,BEADS	FCM1608KF-102T02
B709	024HC51023	CORE,BEADS	FCM1608KF-102T02
B710	024HC51023	CORE,BEADS	FCM1608KF-102T02
B711	024HC51023	CORE,BEADS	FCM1608KF-102T02
B712	024HC51023	CORE,BEADS	FCM1608KF-102T02
B720	024HC51023	CORE,BEADS	FCM1608KF-102T02
B721	024HC51023	CORE,BEADS	FCM1608KF-102T02
B722	024HC51023	CORE,BEADS	FCM1608KF-102T02
B723	024HC51023	CORE,BEADS	FCM1608KF-102T02
B1001	024HC51513	CORE,BEADS	FCM1608KF-151T06
B1004	024HC51816	CORE,BEADS	HCB1608KF-181T20
B1005	024HC51816	CORE,BEADS	HCB1608KF-181T20
B1009	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2401	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2402	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2403	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2404	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2405	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2406	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2407	024HC56013	CORE,BEADS	FCM1608KF-601T02
B2408	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2409	024HC56013	CORE,BEADS	FCM1608KF-601T02
B2418	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2419	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2420	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2421	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2422	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2423	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2430	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2501	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2502	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2503	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2504	024HC51513	CORE,BEADS	FCM1608KF-151T06
B2801	024HC51023	CORE,BEADS	FCM1608KF-102T02
B2802	024HC51023	CORE,BEADS	FCM1608KF-102T02
B2803	024HC51023	CORE,BEADS	FCM1608KF-102T02
B2804	024HC51023	CORE,BEADS	FCM1608KF-102T02
B3402	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3403	024HC51023	CORE,BEADS	FCM1608KF-102T02
B3404	024HC51023	CORE,BEADS	FCM1608KF-102T02
B3405	024HC51023	CORE,BEADS	FCM1608KF-102T02
B3406	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3407	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3408	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3409	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3410	024HC13914	CORE,BEADS	HCB3216KF-391T20
B3601	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3602	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3603	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3604	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3605	024HC56005	CORE,BEADS	FCM1608CF-600T06
B3610	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3611	024HC51816	CORE,BEADS	HCB1608KF-181T20
B3613	024HC51816	CORE,BEADS	HCB1608KF-181T20
B4201	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4202	024HC56005	CORE,BEADS	FCM1608CF-600T06
B4203	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B4204	024HC56005	CORE,BEADS	FCM1608CF-600T06
B4205	024HC56005	CORE,BEADS	FCM1608CF-600T06
B4206	024NC51021	CORE,BEADS	EBMS160808A102_RDC45
B6601	024HC51513	CORE,BEADS	FCM1608KF-151T06
B6602	024HC51513	CORE,BEADS	FCM1608KF-151T06
B6603	024HC51513	CORE,BEADS	FCM1608KF-151T06
B6604	024HC51513	CORE,BEADS	FCM1608KF-151T06
B6605	024HC51513	CORE,BEADS	FCM1608KF-151T06

ELECTRICAL REPLACEMENT PARTS LIST

L701	0216S8470K	COIL	47 UH
L702	0216S8470K	COIL	47 UH
L2401	0216SD2R2J	COIL	2.2 UH
L2403	0216SD2R2J	COIL	2.2 UH
L2802	0216SD330J	COIL	33 UH
L3601	02D6000068	COIL CHOKE	ACM2012D-900-2P-T00
L3602	02D6000068	COIL CHOKE	ACM2012D-900-2P-T00
L3603	02D6000068	COIL CHOKE	ACM2012D-900-2P-T00
L3604	02D6000068	COIL CHOKE	ACM2012D-900-2P-T00
L4203	0216SD220J	COIL	22 UH
L4204	0216SD220J	COIL	22 UH

*** JACKS ***

J701	060K411053	RCA JACK	AV3-13P2-31S1
J702	060R431035	RCA JACK	RCA-349-00C-02
J703	060R431035	RCA JACK	RCA-349-00C-02
J706	063Y000087	JACK PLATE	R102-D04KAF-06
J4201	060J131019	HEADPHONE JACK	MSJ-2000B_AG(O87)

*** CONNECTORS ***

CP101	069S240629	CONNECTOR PCB SIDE	A2001WV2-4P
CP102	069S260629	CONNECTOR PCB SIDE	A2001WV2-6P
CP103	069S230639	CONNECTOR PCB SIDE	A2001WR2-3P
CP106	069S250629	CONNECTOR PCB SIDE	A2001WV2-5P
CP1001	069S140419	CONNECTOR PCB SIDE	A2502WV2-4P
CP2401	069AAA1009	CONNECTOR PCB SIDE	YKF45-0036N
CP2402	069S290629	CONNECTOR PCB SIDE	A2001WV2-9P
CP3401	06977NM020	CONNECTOR PCB SIDE	127301123K2
CP3601	0694YJ3018	CONNECTOR PCB SIDE	1903015-3

*** CRYSTALS ***

X101	100DT01601	CRYSTAL	SMD-49
X2401	100DT02503	CRYSTAL	SMD-49
X3602	100DT02801	CRYSTAL	SMD-49
X6601	100DT01407	CRYSTAL	SMD-49

*** TUNER ***

TU2801	0164100023	DIGITAL TUNER	ENG36E03KRF
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*** NETWORKS ***

NR2401	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2402	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2403	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2404	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2405	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2406	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2407	110P4220M6	R,NETWORK	4D02WGJ0220TCE
NR2408	110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR2409	110P4470M5	R,NETWORK	4D02WGJ0470TCE
NR3603	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3604	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3605	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR3606	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6601	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6602	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6603	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6604	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6605	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6606	110P4330M5	R,NETWORK	4D02WGJ0330TCE
NR6607	110P4330M5	R,NETWORK	4D02WGJ0330TCE

*** OTHERS ***

CP2407	06G3VWT01A	CONNECTOR PCB SIDE	20389-Y30E
CP4201	06G2S21501	CONNECTOR PCB SIDE	D229FD015G107BY

ELECTRICAL REPLACEMENT PARTS LIST

SH3401	126D000044	TERMINAL PIN	YQ-36
SH3402	126D000044	TERMINAL PIN	YQ-36
SH3403	126D000044	TERMINAL PIN	YQ-36
SH3404	126D000044	TERMINAL PIN	YQ-36
SH3405	126D000044	TERMINAL PIN	YQ-36

POWER PCB ASS'Y

*** PCB ***

PCB240	A31B01E240	POWER PCB ASS'Y	CEF273A
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*** RESISTORS ***

△ R403	R3K28B1R8J	R,METAL OXIDE	1.8 OHM 3W
R404	RC31X1155J	RC	1.5M OHM 1W
△ R406	R3K681S22J	R,METAL OXIDE	0.022 OHM 1W
△ R412	R63881R22J	R,FUSE	0.22 OHM 1W
△ R416	R655842R2J	R,FUSE	2.2 OHM 1/4W
R466	R5X2AD151J	R,CEMENT	150 OHM 5W
R473	R3K78A681J	R,METAL OXIDE	680 OHM 2W
R475	R3K78A681J	R,METAL OXIDE	680 OHM 2W
R494	R3K78A681J	R,METAL OXIDE	680 OHM 2W
△ R497	R63881010J	R,FUSE	1 OHM 1W
△ R498	R803R9101J	RC	100 OHM 1/16W
R533	R3K28B473J	R,METAL OXIDE	47K OHM 3W

*** CAPACITORS ***

C402	P2122B334M	CMP	0.33 UF 275V ECQUL
C403	E71JFC391D	CE	390 UF 200V
C404	E71JFC391D	CE	390 UF 200V
△ C406	CD39E0ME3M	CC	0.0015UF 250V
C422	E7EY78101D	CE	100 UF 100V
C423	P4NAE6823H	CMPP	0.082 UF 800V
△ C424	E8E6FC470M	CE	47 UF 200V
△ C427	CD39B0MQ2K	CC	470 PF 250V
△ C432	E7EYF2102M	CE	1000 UF 16V
△ C433	E7EYF4471M	CE	470 UF 35V
△ C434	E7EYF4102M	CE	1000 UF 35V
△ C435	E7EYF3102M	CE	1000 UF 25V
△ C436	CD39E0ME3M	CC	0.0015UF 250V
△ C438	E7EYF4102M	CE	1000 UF 35V
△ C440	E7EYF0222M	CE	2200 UF 6.3V
△ C444	E7ESU0101M	CE	100 UF 6.3V
△ C448	P2122B104M	CMP	0.1 UF 275V ECQUL
C449	E7EYF2102M	CE	1000 UF 16V
C453	E7EYF2102M	CE	1000 UF 16V
C463	CD39B0MQ2K	CC	470 PF 250V
C468	CD39E0M13M	CC	0.001 UF 250V
C470	E7ESF0222M	CE	2200 UF 6.3V

*** DIODES ***

D401	D4AT01H3E0	DIODE RECTIFIER	1H3-E
△ D402	D6E027110A	DIODE VARISTA	ENE271D-10A
△ D403	DOU044520M	DIODE VARISTA	DE37-452M-S00B
△ D404	D6CE24110A	DIODE VARISTA	ENE241D-10A-Q6
D406	D28R1QS040	DIODE	EC31QS04-TE12L
D407	D28R1QS040	DIODE	EC31QS04-TE12L
△ D409	D4CKN54060	DIODE SILICON	1N5406FL-6737
△ D410	D4CKN54060	DIODE SILICON	1N5406FL-6737
D411	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D412	D97U03R91B	DIODE,ZENER	MTZJ3.9B T-77
D413	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D414	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D415	DE7RB3R92B	DIODE ZENER	UDZS3.9B TE-17
D416	D97U02001B	DIODE,ZENER	MTZJ20B T-77
D419	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D420	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D421	DD7R0S3550	DIODE SILICON	1SS355 TE-17

ELECTRICAL REPLACEMENT PARTS LIST

D422	DD7R60M900	DIODE SCHOTTKY	RB160M-90TR
D423	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D424	D4AT01H3E0	DIODE RECTIFIER	1H3-E
▲ D425	D2WXN40050	DIODE SILICON	1N4005-EIC
D426	D1VT001330	DIODE,SILICON	1SS133T-77
▲ D427	D2WXN40050	DIODE SILICON	1N4005-EIC
D428	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D429	DD7R0S3550	DIODE SILICON	1SS355 TE-17
▲ D430	D2WXN40050	DIODE SILICON	1N4005-EIC
▲ D431	D2WXN40050	DIODE SILICON	1N4005-EIC
D432	D2WXRJ3AM0	DIODE SILICON	RU3AM-EIC
D433	D4AT01H3E0	DIODE RECTIFIER	1H3-E
▲ D434	D2LKS3400	DIODE SCHOTTKY	SR340-004
▲ D435	D2CFC91020	DIODE SILICON	ERC91-02J11SC
▲ D437	D2CA2C10R0	DIODE SCHOTTKY	YG862C10R
D438	DD7R0S3550	DIODE SILICON	1SS355 TE-17
D439	D97U03001B	DIODE,ZENER	MTZJ30B T-77
▲ D440	D2CA2C10R0	DIODE SCHOTTKY	YG862C10R
D442	D4AT01H3E0	DIODE RECTIFIER	1H3-E
▲ D443	D2LKS3400	DIODE SCHOTTKY	SR340-004
D445	D97U01501B	DIODE,ZENER	MTZJ15B T-77
D446	D1VT001330	DIODE,SILICON	1SS133T-77
D447	D1VT001330	DIODE,SILICON	1SS133T-77
D448	D1VT001330	DIODE,SILICON	1SS133T-77
D449	D1VT001330	DIODE,SILICON	1SS133T-77
D450	D97U03R31B	DIODE,ZENER	MTZJ3.3B T-77
D455	D2LXSR2400	DIODE SCHOTTKY	SR240-F
D456	D1VT001330	DIODE,SILICON	1SS133T-77
D459	D97U02201B	DIODE ZENER	MTZJ22B T-77
D460	D4AT01H3E0	DIODE RECTIFIER	1H3-E
D461	D97U01101B	DIODE,ZENER	MTZJ11B T-77

*** ICS ***

▲ IC401	I2GT050600	IC	MP2A5060
▲ IC402	I5SD0P2F40	IC	MIP2F4
▲ IC403	I1KJ9A431A	IC	KIA431A-AT
IC404	I1KJ9A431A	IC	KIA431A-AT
IC405	I0GA9XF020	IC	PQ070XF02SZH
▲ IC406	I1LF010150	IC	AL1015
IC407	I03T057790	IC	LA5779-E
▲ IC408	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
▲ IC409	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
▲ IC410	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)

*** TRANSISTORS ***

Q401	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q402	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q403	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q404	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q405	TCAT03209Y	TRANSISTOR SILICON	KTC3209_Y-AT
Q406	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q407	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
Q408	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q409	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q410	TJ7M50P030	FET	RSS050P03_TB
Q412	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q415	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q416	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q417	TAAT01241Y	TRANSISTOR SILICON	KTA1241_Y-AT
Q418	TNAAA05001	COMPOUND TRANSISTOR	KRC101S-RTK
Q420	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q421	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
Q422	TBA0011510	TRANSISTOR SILICON	KTb1151
Q423	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q424	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q425	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
▲ Q433	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
▲ Q434	T8YJ2412K0	TRANSISTOR SILICON	2SC2412KT146 R,S
	T25F035630	FET	2SK3563(ORION_Q)

or

ELECTRICAL REPLACEMENT PARTS LIST

*** COILS ***

B401	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B402	024HC51816	CORE,BEADS	HCB1608KF-181T20
B403	024HC51816	CORE,BEADS	HCB1608KF-181T20
B404	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
⚠ L401	029X000129	COIL,LINE FILTER	SS30V-R300071
⚠ L402	029X000129	COIL,LINE FILTER	SS30V-R300071
⚠ L405	02167E220K	COIL	22 UH
L408	021U0L470M	COIL	47 UH
L409	02130G330M	COIL	33 UH
L413	02167E220K	COIL	22 UH
L415	02167E220K	COIL	22 UH

*** TRANSFORMERS ***

⚠ T401	0487420014	TRANSFORMER,SWITCHING	87420014
T402	0481190074	TRANSFORMER,SWITCHING	81190074

*** JACKS ***

J401	064Q1A0003	JACK,AC	CCT2302-0911
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*** CONNECTORS ***

CP401	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP403	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP405	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP406	069S2E0639	CONNECTOR PCB SIDE	A2001WR2-14P
CP408	069D01001A	CONNECTOR PCB SIDE	003P-2100
CP411	06977N001B	CONNECTOR PCB SIDE	TWG-P23P-B1
CP413	069D01001A	CONNECTOR PCB SIDE	003P-2100

*** FUSES ***

⚠ F401	081PC6R305	FUSE	51MS063L
⚠ F404	0835C01603	MICRO FUSE	20N_1600FS
FH401	06710T0009	HOLDER,FUSE	EYF-52BCY
FH402	06710T0009	HOLDER,FUSE	EYF-52BCY

*** RELAYS ***

⚠ RY401	0560V50119	RELAY	ALKS329 A60
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*** THERMISTOR ***

⚠ TH401	DSQ0VE4R0L	THERMISTOR	4D2-18LCS
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*** OTHERS ***

EL2401	124116281A	EYE LET	XRY16X28BD
EL2402	124120301A	EYE LET	XRY20X30BD
SH401	126D000044	TERMINAL PIN	YQ-36
SH402	126D000044	TERMINAL PIN	YQ-36
SH403	126D000044	TERMINAL PIN	YQ-36
SH404	126D000044	TERMINAL PIN	YQ-36
SH405	126D000044	TERMINAL PIN	YQ-36
SH406	126D000044	TERMINAL PIN	YQ-36
SH407	126D000044	TERMINAL PIN	YQ-36
SH408	126D000044	TERMINAL PIN	YQ-36

OPERATION PCB ASS'Y

*** PCB ***

PCB270	A31B01E270	OPERATION PCB ASS'Y	CEF274A
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*** SWITCHES ***

ELECTRICAL REPLACEMENT PARTS LIST

SW2201	0504101T34	SWITCH,TACT	EVQ21505R
SW2202	0504101T34	SWITCH,TACT	EVQ21505R
SW2203	0504101T34	SWITCH,TACT	EVQ21505R
SW2204	0504101T34	SWITCH,TACT	EVQ21505R
SW2205	0504101T34	SWITCH,TACT	EVQ21505R
SW2206	0504101T34	SWITCH,TACT	EVQ21505R

*** CONNECTORS ***

CP2203	069S230639	CONNECTOR PCB SIDE	A2001WR2-3P
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AND OTHERS

*** COILS ***

TR1001	02A6B2E0A1	CORE,FERRITE	HF70T22*10*14
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*** CONNECTORS ***

CD301	06CU145005	CORD CONNECTOR	CU145005
CD403	06CU2E0601	CORD CONNECTOR	CU2E0601
CD2201	06CU256001	CORD CONNECTOR	CU256001
CD2202	06CU233301	CORD CONNECTOR	CU233301
CD7201	06CHRU1301	CORD CONNECTOR	CHRU1301

*** AC CORD ***

 CD3805	120Q119905	CORD SET AC	P201-2476-2
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*** OTHERS ***

BT001	141R003018	BATTERY,MANGAN	GR6M
BT002	141R003018	BATTERY,MANGAN	GR6M
SP1001	070Y056003	SPEAKER	S0412F03
SP1002	070Y056003	SPEAKER	S0412F03
TM101	076B0MQ030	TRANSMITTER	ETR0088-010161
V2301	09E4126009	LCD	LK255T3LZ5AZ

RESISTOR

RC..... CARBON RESISTOR

CAPACITORS

CC..... CERAMIC CAPACITOR
CE..... ALUMI ELECTROLYTIC CAPACITOR
CP..... POLYESTER CAPACITOR
CPP..... POLYPROPYLENE CAPACITOR
CPL..... PLASTIC CAPACITOR
CMP..... METAL POLYESTER CAPACITOR
CMPL..... METAL PLASTIC CAPACITOR
CMPP..... METAL POLYPROPYLENE CAPACITOR

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